

CALIFORNIA AND WESTERN MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION

Official Organ of the California, Nevada and Utah Medical Associations

THE STATUS OF THE CLINICAL PATHOLOGIST

A Symposium on One of the Much-Discussed Angles of Medicine and Health Progress

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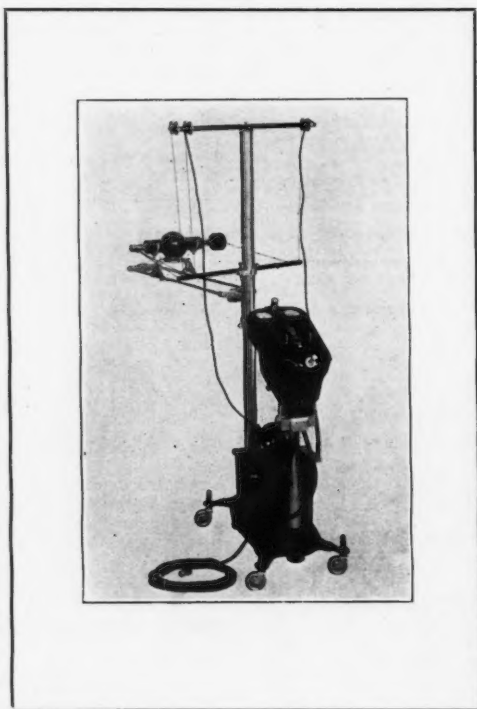
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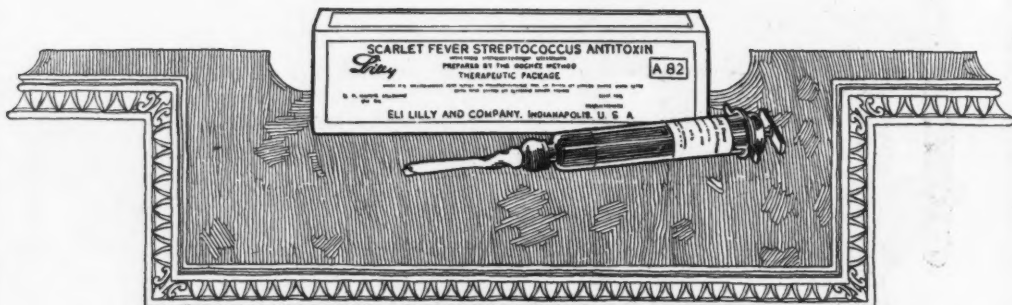
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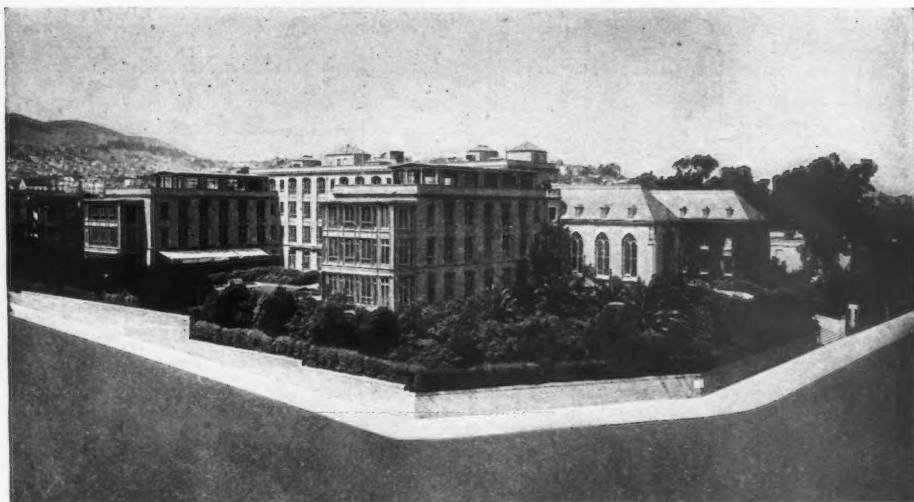
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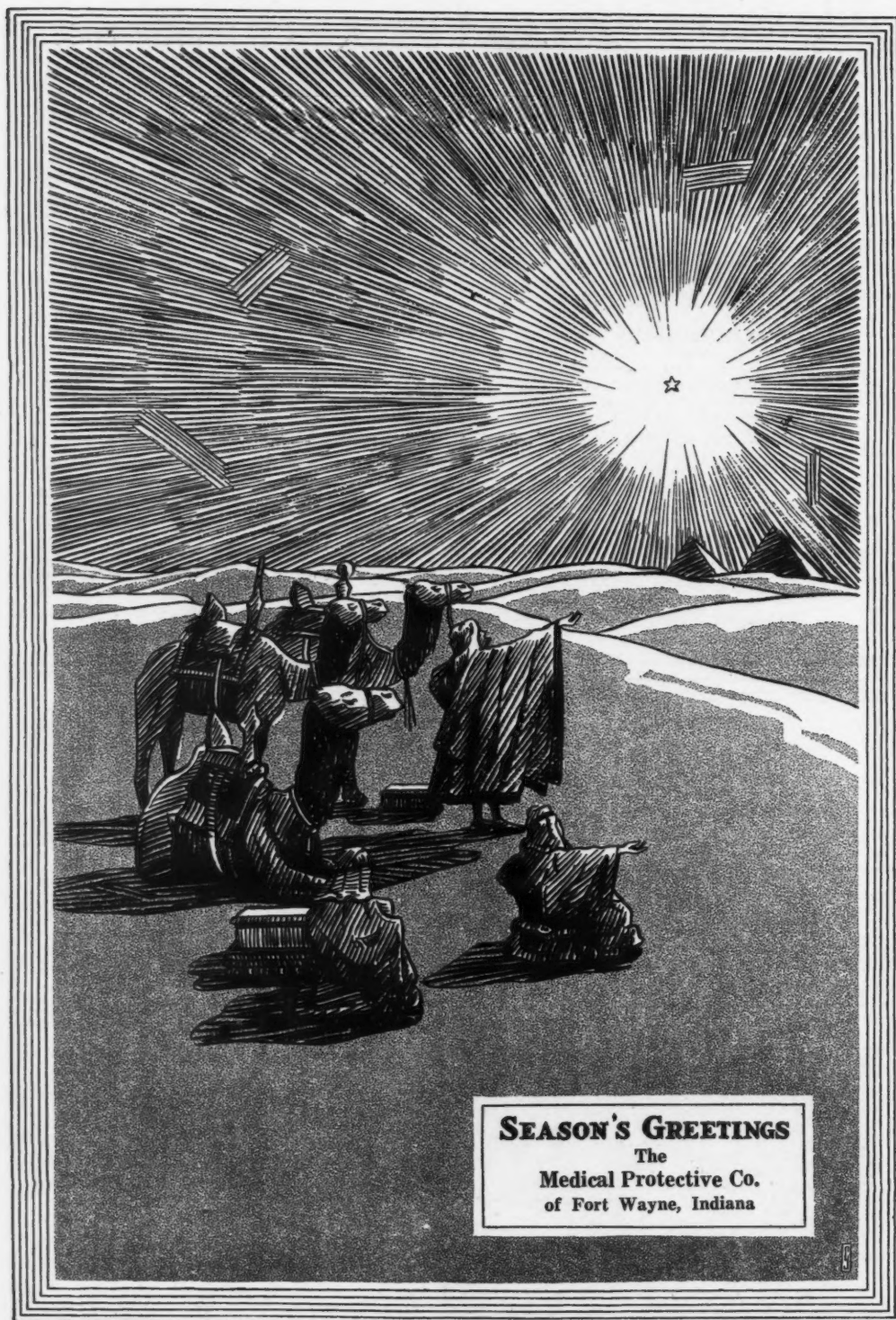
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William Cadogan (His Essay on Gout). By John Ruhrah, M. D., University of Maryland. Review copy by courtesy of publishers. Paul B. Hoeber, Inc., New York, 1925. For sale by our advertisers.

The Medical Record Visiting List or Physicians' Diary for 1926. Revised. New York: Complimentary review copy by William Wood & Company, Medical Publishers. For sale by advertisers in California and Western Medicine.

The Medical Department of the United States Army in the World War. Volume XV. Statistics. Part Two, Medical and Casualty Statistics. Based on the Medical Records of the United States Army, April 1, 1917, to December 31, 1919, inclusive. Prepared under the direction of Major-General M. W. Ireland, the Surgeon-General. By Major Albert G. Love, M. C., U. S. Army. Washington: Government Printing Office, 1925.

Insects and Disease of Man. By Carroll Fox, M. D., Surgeon U. S. P. H. Service. With 92 illustrations. Review copy by courtesy of publishers, P. Blakiston's Son & Co., Philadelphia. For sale by advertisers in this issue of California and Western Medicine.

Annals of Roentgenology. Volume VI. Skull Fractures Roentgenologically Considered; 83 Roentgen-ray Studies on 44 Full-page Plates and 49 Text Illustrations. By William H. Stewart, M. D. With Surgical Comments by William H. Luckett, M. D. Review copy by courtesy of publishers, Paul B. Hoeber, Inc., 1925.

Man: His Making and Unmaking. By E. Boyd Barrett, Ph. D., Professor of Psychology, Georgetown University, Washington, D. C. Review copy by courtesy of the publisher, Thomas Seltzer, New York. For sale by advertisers in California and Western Medicine.

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 Wednesday 8:30 a. m.—Operations. Charles G. Levison, M. D., and Harold Brunn, M. D.
 Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.
 Thursday 9:00 a. m.—Medical Ward Rounds. Emil O. Jellinek, M. D.
 Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.
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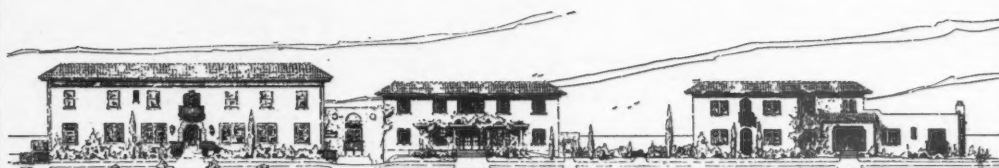
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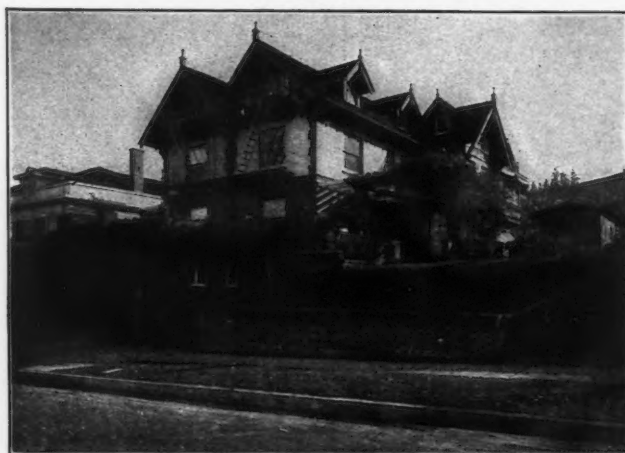
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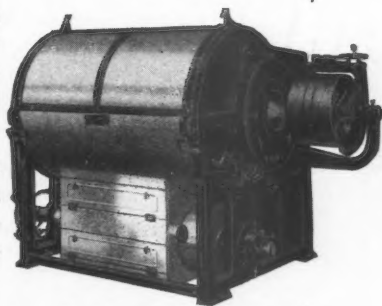
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THE STATUS OF THE CLINICAL PATHOLOGIST

By ROBERT A. KILDUFFE, M. D., *Director Laboratories Atlantic City Hospital,
Atlantic City, New Jersey (formerly of Los Angeles)*

IN EFFECT, Doctor Kilduffe's article and the many and interesting discussions constitute a symposium on one of the much-discussed angles of medicine and health progress.

It is often necessary for an editor who examines hundreds of manuscripts a year to drive himself through some of his work. Then, again, copy comes along that is so intensely interesting that the editor lays his "blue pencil" aside and gives himself up to the joy of reading. This symposium is in the latter class. Rarely will the physician reader encounter so many clearly elucidated angles to a vexing problem as are here brought together—by men who do not, by any means, entirely agree.—Editor.

Discussants are M. C. Terry, John W. Shuman, Elmer W. Smith, E. H. Ruediger, William F. Cheney, Wilfred H. Kellogg, William Ophuls, L. S. Schmitt, Newton Evans, Rene Bine, A. W. Hewlett, William J. Kerr, Stanley Stillman, Gertrude Moore, F. R. Nuzum, Walter V. Brem, A. M. Moody.

ANYONE attempting a classification of physicians as individuals or groups, in accordance with their qualifications or attainments, is apt to find the task entirely gratuitous and repaid only by criticism of his efforts. A recent discussion anent the status of the clinical pathologist—or, perhaps, it were better looked upon as an initiation of a discussion, for the subject is not to be dismissed offhand by a dogmatic pronouncement or two—forms no exception to the rule, but without discussion and the comparison of views and opinions, no conclusions can ever be reached.

It is customary, in philosophical discussions, at least—and it would seem as if the clinical pathologist must exercise a certain amount of philosophy in this matter—to clarify the preliminaries by some attempt to clearly define the subject matter, and it would be advantageous, therefore, to more or less succinctly determine if possible what is a clinical pathologist before attempting to assign to him offhand a classified niche in the practice of medicine.

That some such attempt is necessary is obvious, for even to the casual observer it is clear that there are many conceptions as to what constitutes a clinical pathologist, all very essentially modifying and effecting attempts at his classification. It is a common occurrence to note in the advertising columns of medical journals, for example, advertisements seeking "Laboratory technician; must be M. D.," evidencing at once that in that hospital, and in the minds of its directors, a pathologist is simply a person of more or less skill and training in the manipulation of laboratory apparatus.

This is not altogether surprising and capable of some explanation, but it is surprising and not so readily explained to find a source of information and authority standing sponsor for the dictum that "the status of the clinical pathologist is not the same as that of the internist or surgeon. The latter deals with variables—human beings—the former conducts manipulations on fixtures—inanimate substances."

Fortunate it is, indeed, that even a pronouncement of authority may—when needs must—be subjected to scrutiny. Unfortunate it is, also, that by many this statement will be accepted at its face value as crystallizing a somewhat common idea that the clinical pathologist, in some ways, stands apart from other men and that, in some way yet to be exactly defined, his qualifications are different from and, perhaps, less exalted than those of his purely clinical brethren.

That some such attitude exists cannot be denied; that it can be justified may be disputed. The responsibility for its inception can only be placed with difficulty—if at all; for its continuance the clinical pathologist himself is largely responsible.

In the early days of medicine it was comparatively easy to separate the medical profession into three broad groups:

I. Those, comparable to the physician of today, who studied the patient and his symptoms and proceeded accordingly and whose work was done within the living body of the patient, as it were.

II. Those, comparable to the surgeon, whose work was done *on* the living body of the patient; who rearranged it and improved upon the defects of nature and who, as many have maintained, detected and corrected the errors of the first group.

III. Those, pathologists as originally conceived, whose work was done largely independently of the living body in a study of the causes and effects of disease and its mechanism and who, inadvertently, at times revealed the errors of omission and commission of both the preceding groups.

In those comparatively prehistoric days the field of laboratory examination was restricted, the tests

and methods of examination relatively few in number, and their indications and significance apparently clear and distinct. Possibly it was in those days that the idea of pathology as the "handmaid of medicine," instead of its colleague, first took root.

Those were the days when albumin in the urine meant "Bright's disease" and sugar diabetes. In those pleasant times every man was his own urologist and microscopist; he made his own examinations and determined their significance at will. Those without the time, or not caring to give it, sent their work to others who more or less restricted their efforts to those lines and whose function, as the practitioner saw it, was simply to make the tests and furnish him with a report.

With the evolution of scientific medicine, the scope and extent of laboratory examinations and technic broadened by leaps and bounds until, at the present time, unless by strenuous effort and continuous study and reading he manages to keep apace, the average individual soon finds himself lost in a maze of complexities. In fact, so numerous and so varied and so complex have the methods of laboratory study become that now even the laboratory has its specialized departments.

In the early, and even relatively recent, days the hospital laboratory, except in large and prominent institutions, was apt to be a somewhat forlorn corner in the basement or some place not especially desired by any other individual or department, and devoted to more or less routine examinations as dictated by the fancy or idiosyncrasies of the staff and the energy, ability, and initiative of the one in charge—too often, the resident physician, less often a more or less qualified technician.

At times, in order to gain a foothold in the hospital and as a stepping-stone to a future place on the clinical side of the staff, a younger man took the place as "pathologist," regardless of his primary desires or qualifications. Then came the movement for the betterment of hospitals and the establishment of the laboratory as an important and vital part of the hospital.

Forthwith, hospitals suddenly realized that laboratories must be equipped—particularly as regards personnel—and, likewise, that the supply of qualified and competent men was somewhat below the demand. With the usual eye to hospital expenses, salaries were not often of such proportions as to cause financial upheavals, and some reluctance and dismay grew out of the fact that pathologists could not be had for the same price as technicians, and some occasional surprise occurred to find that valiant pathologists now and then made their acceptance of positions contingent upon an equal footing on the staff with other staff physicians.

Not a little of the somewhat derogatory opinion held of the pathologist in some quarters may be laid to his willingness—often in a spirit of scientific endeavor—to accept positions with inadequate salaries and undignified standing, as regards his status on the staff. This is true of the present day in many instances. What other construction can be drawn when a great medical school, for example, advertises for a "well-qualified physician" who must be, it is stipulated, a graduate of one of several great universities, to take a position as whole-time patholo-

gist to an affiliated hospital for the astounding remuneration of \$2200 a year! Can it be wondered at that many hospitals not only offer inadequate salaries in return for the highest qualifications, but moreover, rule, in addition, that the pathologist shall not be allowed to see patients sent to him personally in consultation, and that when called to see patients in the wards or private rooms, with staff physicians, *his* status shall not be that of a consultant?

The difficulty is to understand why pathologists submit to such restrictions. Certainly, their status under such conditions is decidedly different from that of the surgeon or internist. In the endeavor to comply with the qualifications set up by hospital requirements, an important factor in the selection of a pathologist became, not what does he *know*, how fitted is he to correlate the work of the wards and the laboratory, but *how many kinds* of things can he do, how many different kinds of tests can he make? Technical and manipulative expertness became paramount, and the idea of the pathologist as a worker of tests was fostered and grew apace. A further helping hand to this conception was given by a certain proportion of physicians who look upon the test as the thing rather than its *interpretation*; who too often look upon the significance and interpretation of laboratory examinations as clear and simple, and who feel within themselves as omniscient competence, not only to select the most applicable and informative tests to be made, but, further, to announce in no uncertain terms its exact significance in the case at hand.

The status of the surgeon on the medical Olympus seems quite definite, and is easily ascertained on application; the status of the physician is not quite so clear. If by these latter are meant those who are especially trained and particularly adept in the diagnosis and treatment of medical conditions by medical means, their place in the sun may be more or less definitely determined; if, however, is meant the general practitioner who has progressed or catapulted into an office building, his exact status is determined, not by the fact that he deals with human beings—"variables"—but by his qualifications, scientific acumen, and ability.

It is somewhat difficult to see just why there should be any question as to the status of the pathologist or to be tolerant with discussion as to his place in medical practice. If recollection is not at fault, the great surgeons and many of those renowned among physicians founded their greatness upon a thorough training in pathology and pathological investigations. Was their clinical greatness achieved because or in spite of this, or did their knowledge and ability only commence with their initiation into the clinical world? Was their ability to make a diagnosis—upon which intelligent and successful treatment is always founded—aided or hampered by their training in things pathological?

NO FEAR OF CONTRADICTION NEED BE EXPERIENCED IF ONE LAYS DOWN AS A PREMISE FOR CORRECT DIAGNOSIS AND INTELLIGENT TREATMENT—EITHER MEDICAL OR SURGICAL—A THOROUGH KNOWLEDGE OF THE PATHOLOGY OF THE CONDITION. THE CLINICAL PATHOLOGIST POSSESSES SUCH KNOWLEDGE. WHEREFORE, THEN, IS HE OF LOWLY

STATUTE UNLESS HE COUPLES A PRESCRIPTION OR TWO OR A METHOD OF TREATMENT WITH HIS LABORATORY FINDINGS AND THEIR INTERPRETATION?

Because "he deals with fixed substances." Let us contemplate this conception. This, perhaps, might be true of the technician—not of the pathologist who, if he is worthy of the name and possesses the confidence of his associates, certainly comes into close clinical and personal contact with the patient upon whom the tests are made and from whom test materials are secured.

The radiologist takes a picture, works with a multitude of "manipulations on fixtures and inanimate substances" most impressive to the uninitiated and yet, forsooth, is a respected and exalted member of the profession.

The serologist draws a specimen of blood and conducts a complement-fixation test—not an inspiring spectacle, to be sure, but one involving a most varied degree of skill and knowledge, and is looked upon askance. Wherein lies the difference? *The radiologist interprets his findings!* He is furnished with clinical data; privileged, when necessary, to conduct such examinations of the patient as are deemed of interest, and furnishes the clinician not only with the finished plate or film, but also with a statement as to the significance, in terms of the patient, of the picture presented. This seems to be the essential point of difference: The radiologist assumes, and is asked to assume, the responsibility for the interpretation of his findings, while the privilege is largely denied to the pathologist who is looked to simply for the report.

Now it is impossible to deny, if one is at all conversant with the subject, that it is not the making of the test, but its interpretation, its significance in terms of the particular case which is of value.

Technicians may be taught to perform various manipulations, sometimes of intricate and complicated character, but the end-result is simply a completed test—no more. The informative value of the test lies in its interpretation, and for that the technician is not qualified. For that is required a varied and extensive training, not only in pathology and immunology and a host of allied and related subjects, but, in addition, the training, skill, and experience and ability to read the results by a combined estimation of all the findings evaluated by observation, deduction and inferential reasoning concerned, not only with the test, but with the patient!

It seems to be more or less generally admitted—sub rosa at least—that the physician in general is not as well qualified as the radiologist to read and interpret the significance of x-ray pictures. It seems to be a more or less common conception, also, that anyone can read and interpret the results of laboratory examinations. The correctness of this last assumption seems open to discussion.

From the standpoint of the laboratory worker, cognizant of the number of laboratory reports which may be added to the patient's chart because of the extensive area now covered by the various methods of laboratory examination, it would seem that there is an all-important difference between the employment of laboratory methods and their clinical utilization.

No one is more quick than the clinical patholo-

gist to note that the development of laboratory methods has had a tendency to detract from clinical acuteness in the study and analysis of the patient; to develop a tendency to demand of laboratory methods that they shall render unnecessary the, perhaps, arduous and at times burdensome analysis of the history and the results of a painstaking meticulous, thorough, and minute physical examination. This I have previously noted (*Journal A. M. A.*, May 13, 1922), together with its effect upon the decadence of observation as a clinical art, and attention is again called to this by Conner in an able and timely paper in which he pleads for "an effort on the part of all of us to resist and counteract the growing inclination to regard the use of laboratory and instrumental aids as the chief means of diagnosis, and to give too little weight to the more laborious but more important measures of painstaking clinical observation and careful deductive reasoning." In other words, he pleads for the *intelligent* use of the laboratory as a *phase* of the examination of the patient and the interpretation of the findings in the light of *all* the information obtainable, thus emphasizing that the laboratory is most useful and informative to those by whom it is intelligently and not blindly used.

There always has been discussion as to who shall interpret the laboratory reports. As I have stated elsewhere (*Med. Rev. of Rev.*, 1922): "Theoretically, the physician, as the one in close contact with the patient, should be the interpreter; actually, however, for even the laboratory finds itself divided into highly specialized departments, unless he be a man of exceptional training and experience, fortified by extensive reading and a retentive memory, it is almost impossible for the physician of today to be familiar with all the resources of the clinical laboratory of today."

THE QUESTION ULTIMATELY RESOLVES ITSELF INTO THIS: SHALL THE CLINICAL PATHOLOGIST BE PERMITTED—EVEN REQUESTED—TO ASSIST IN THE INTERPRETATION OF LABORATORY REPORTS ON THE ASSUMPTION THAT HE IS—OR SHOULD BE—WELL QUALIFIED BOTH FROM THE LABORATORY AND CLINICAL STANDPOINT TO EVALUATE THEM, OR SHALL THE INTERPRETATION OF LABORATORY REPORTS BE CONFINED SOLELY AND ENTIRELY TO THE CLINICIAN BY "DIVINE RIGHT," AS IT WERE, AND THE PATHOLOGIST BE SIMPLY THE INDIVIDUAL FROM WHOM THEY EMANATE?

This latter assumption concedes or attributes to the clinician *in general* an omniscient ability in this respect. However, when the clinical pathologist, as he does, observes the diagnosis of syphilis cast aside because of a single negative serologic report; or that a negative blood reaction is a source of amazement in the presence of neurosyphilis; when he is constantly appealed to as to the reason for and significance of an anti-complementary report; when he observes the more or less complete reliance placed upon the total white cell count in a suspected infection; the importance given to an isolated gastric analysis; the administration of bacterial vaccines in daily doses; requisitions for malaria, but neglect of the total white count when the patient has had a chill; the surprise that an agglutination test could be negative in the presence of undoubted typhoid

fever or the dismissal of this possibility because of a negative reaction; the fact that more laboratory tests are ordered for the corroboration of preconceived ideas than for their purely informative value; the lack of evident motive for the requisition of whole flocks of non-related laboratory tests difficult, to say the least, to correlate with the clinical findings or history, and the not infrequent tendency to consider exhaustive clinical or historical data unnecessary if there is a laboratory test applicable to the condition—confronted with these and other experiences common to all laboratory workers, it is not to be wondered at if the clinical pathologist at times has a fleeting doubt if *all* clinicians are able to utilize the laboratory to its fullest extent; or that the mechanism leading to the production of various positive reactions is *always* clearly understood and their clinical significance quite clear.

It is a safe statement to make that the intelligent practice of medicine demands an intelligent conception of the structure, physiology, and pathology of the part one essays to treat. The best clinician, be he surgeon, physician, or what not, is he who has the pathology of the condition at his finger-tips.

Although the clinical pathologist *per se* does not treat disease, it can be safely suggested that, knowing the pathology of the condition; the mechanism resulting in the manifestations which constitute its symptomatology; the methods of estimating the degree to which, as a result of the condition, functional efficiency is disturbed and the particular function impaired, together with the general resources at hand to combat these effects—although, perhaps, the pathologist might not be prepared to dash off a prescription or two offhand, it is quite likely that the measures he would ultimately suggest would be rationally conceived. It is not likely, for example, that he would prescribe expectorants in the stage of consolidation in pneumonia nor expect much from their use. If he deals only with "inanimate substances," with test tubes and reagents, he is not a real clinical pathologist. The real clinical pathologist is a doctor of medicine, with the same training as the surgeon or physician; equally well grounded in the clinical arts, and, moreover, particularly adept in the specialized manipulations of his chosen specialty, and able to interpret in terms of the patient the pathology he demonstrates in the laboratory.

He is a man who is capable not only of conducting various laboratory manipulations, but also by virtue of his special training, his reading, and his correlated laboratory and clinical experience, to apply them to the diagnostic problems at hand and, what is quite important, to select from those available, those which are likely to be informative. He is closely concerned with the treatment of disease as governed, and at times even indicated, by laboratory procedure. He should be, as has been said, the man who knows the most about disease.

He is the one to whom the thinking clinician, more interested in the welfare of his patient than the magnification of his dignity, can say: "Here is the patient. These are the clinical findings. This is the history. What can the laboratory do in the interests of this patient and his return to health?" And only when such a clinician and such a patholo-

gist put their heads together are the interests of the patient best conserved.

The real clinical pathologist not only sees the test, but he also sees the patient and applies, not only his laboratory, but his clinical knowledge as well to a consideration of the problem. He works not for but *with* the clinician and, sometimes, when he steps over into the clinical world and becomes a physician or surgeon, he finds his status in that sphere readily established and not a whit impaired by his previous specialization in another sphere.

It is, perhaps, true that it is not the pathologist's duty to make the diagnosis for the clinician, but rather to supply him with informative data. It is equally true that there are times when the data requested by the clinician are neither informative *per se* nor apt to be made so by the interpretation put upon them. Under these—and, indeed, under all circumstances—the true status of the clinical pathologist should be evident: he should be openly, as he often now is indirectly, a consultant.

DISCUSSION

M. C. TERRY, M.D. (Consolidated Building, Los Angeles)—I agree with Dr. Kilduffe that the clinical pathologist is a physician with the same training as the surgeon or internist, but I do not think he is equally well grounded in the clinical arts. If he were all that, then the thinking (and conscientious) clinician would endeavor to become a clinical pathologist himself, or he would say to the pathologist, "Here is the patient—take him," and we should soon have no pathologists. The clinical pathologist is a specialist, as Dr. Kilduffe has also said; let us recognize the limitations implied.

He should, of course, keep in touch with the clinic and with clinicians, the better to understand and explain to others the significance of his own work, for the new ideas such contact produces and for material for whatever special problem he may have in hand. But it is fortunate for him that his time is not often required for bedside consultation, even in cases in which a considerable amount of laboratory work is done. To a great extent he can choose his own consultations of this sort—true, without pay, as a rule.

The real clinical pathologist has few days without consultation in his laboratory or over the phone, and these are generally sufficiently clarifying for both the clinician and the pathologist. True, again, the pathologist seldom gets paid for this very real service, and that seems hardly fair, but here the pathologist's troubles are a part of the general social problem of medicine, and the solution of that problem is hardly in sight.

JOHN W. SHUMAN, M.D. (Westlake Professional Building, Los Angeles)—Pathology is an integral part of medicine. It embraces bacteriology; it functions diagnostically and therapeutically in the laboratory upon material things, pre and post-agonal, pertaining to the human being. The term "clinical" pertains to bedside or clinic. The doctor of medicine who devotes most of his time and energy to pathology always has been and still is termed a pathologist; usually he is very weak along clinical lines. The doctor of medicine who devotes most of his time and energy to the study of subjective and objective signs and symptoms of disease at the bedside has always been and still is called a clinician; he, too, frequently is not well versed in pathology. It is logical to call an M.D. who is wisely interested in pathology and clinical medicine a clinical pathologist; he could be called a consultant in medicine. There is no more excuse for a well-informed consultant in medicine to misinterpret an x-ray series of the gastro-intestinal tract than there is for misinterpreting fecal vomiting or for his failure to recognize a malarial parasite than there is for him failing to recognize an enlarged spleen.

It is not the status of the clinical pathologist that we should discuss, but the status of clinical pathology. Kilduffe is quite right in reference to his "three prehistoric

groups as they used to be." I may add they are still with us, but in closer harmony. I have no regard for that dangerous type of surgeon who would submit a piece of tissue without complete data to the pathologist, demanding a diagnosis. Happily, this method of procedure is being changed, and it is the clinician working with his pathologist and with the best interest of his patient at heart that has brought about the changes. Today the status of clinical pathology is that the up-to-date physician must know and be able to do "his stuff" diagnostically and therapeutically better than he ever did it before. The public demands it. Diagnosis calls for the sane use of clinical methods which entail dependable laboratory procedures, all of which must be supervised and correlated by the doctor who is managing the patient, and his consultant.

Kilduffe's discussion is a most thorough outline for a consultant in any branch of medicine. The paper is well written, and is a fine exposition of the idealistic status of the clinical pathologist. Any individual who aspires to become well versed in clinical pathology may well study his article.

ELMER W. SMITH, M. D. (St. Mary's Hospital, San Francisco)—I agree most thoroughly with most of Dr. Kilduffe's article. The physicians and the hospital staffs have been relying so long upon the advice and reports of the lay technician, unsupervised by a medical man, that they naturally would be inclined to place the man with the M. D. degree who does similar work in the same class. I feel that the clinical pathologist, especially one connected with a hospital, should not be expected to do the ordinary routine work. Technicians can readily be trained to do this work in a short time, and in some cases do it more dexterously than the pathologist himself. He should see the reports and have their interpretation in hand so that he can intelligently discuss the case in hand with the physician or clinician in charge. His services as consulting pathologist or clinical pathologist should merit the same evaluation as that of the consulting clinician. The real clinical pathologist should have time to read, to visit other laboratories for new and supplementary methods, etc. The clinical pathologist is expected to know something on practically every phase of medicine. He is called in for consultation by every specialist from the eye to the genito-urinary specialists, yet his services, in the past at least, have not commanded the same recognition either financially or professionally.

Nowadays there are too many requests of the laboratories for a "diagnosis" rather than a report that will help lead to a diagnosis. I agree with Kilduffe that a proper diagnosis requires the use of our common observations or "senses," as well as laboratory reports; yet in many instances the clinical pathologist, or even the lay technician, is expected to form a diagnosis without one iota of information about the patient. One actual case illustrates this: A physician sent to a pathologist a bit of mucous membrane, requesting a *diagnosis*, without one bit of information regarding the source of the material or any other data. The clinical pathologist does not possess supernatural intelligence, nor should such be expected of him. He should be treated as a fellow practitioner on an equal basis, in a common cause, working for a common end: namely, the diagnosis of the disease and a study of the progress or trend of the same.

E. H. RUEDIGER, M. D. (Angelus Hospital, Los Angeles)—Clinical pathology in the broadest sense of the term really includes everything pertaining to illness except the treatment. A clinical pathologist should be a graduate in medicine and SHOULD BE LICENSED TO PRACTICE MEDICINE. ON SEVERAL OCCASIONS COURTS HAVE RULED THAT DIAGNOSING DISEASE MEANS PRACTICING MEDICINE, AND ANY PERSON NOT LICENSED TO PRACTICE MEDICINE WHO DIAGNOSES DISEASE AND CHARGES A FEE FOR SUCH SERVICES IS GUILTY OF PRACTICING MEDICINE WITHOUT A LICENSE. The clinical pathologist frequently makes diagnoses. For instance, a tumor is sent to him for *diagnosis*. In diphtheria, tuberculosis, malaria, typhoid fever, leukemia, and in many other conditions the diagnosis is frequently made in the laboratory, and a positive diagnosis is usually impossible without laboratory aid. It may be argued that the clinical pathologist acts under directions of a licensed clinician, but this is not tolerated legally and should not be

ethically. Under existing laws a surgeon may not remove appendices, thyroids, unless he is licensed to practice medicine and surgery, even if such an operation is requested by someone who is so licensed.

At the present time there is not enough co-operation between clinician and clinical pathologist. Usually the clinician is to blame. He does not seek advice because he wants all the credit for making the diagnosis. On this point I have seen clinicians go so far as to forbid the clinical pathologist from making the diagnosis of tumors. The clinician demanded a description from which he could make his own diagnosis.

For the benefit of medicine and for the benefit of the patients, clinicians and clinical pathologists must work together. Progress in medicine will be impossible unless clinical findings and laboratory findings are carefully compared, and to that extent the clinical pathologist should be a consultant.

WILLIAM FITCH CHENEY, M. D. (Shreve Building, San Francisco)—In a busy world like ours it scarcely seems worth while to spend time discussing the relative importance of individual workers. A man ought to be judged in the medical profession, as in any other vocation, not by the position he holds or the income he receives, but by the quality of what he produces. Whether his work is done in hospital wards, at patients' homes, in laboratories or operating-rooms, the object of each and every member of the medical profession should be service to humanity; and his ambition should be to do his work with the maximum of benefit to those who entrust themselves to his care. What difference does it make where the work is done, and who shall decide that one place of work is more honorable than another? If we all try at all times to be just to one another, as well as to those outside our profession; if we walk humbly, without undue estimation of our own importance in the scheme of things, there will arise no occasion for belittlement of any man's work because we consider it of less value than our own. We need one another's help, and we cannot get too much in the effort to solve our problems; and the only true measure of another man's worth is not the character of his contribution, but the thoroughness, the intelligence, and the honesty with which he does his part.

WILFRED H. KELLOGG, M. D. (State Hygienic Laboratory, Berkeley)—I believe Dr. Kilduffe has, in the main, the right idea regarding the proper place in medicine of the clinical pathologist, and that in the future it will be recognized more than at present that the field of clinical pathology is essentially a specialty of medicine. At the present time the idea that laboratory procedures are comparatively simple and are of such an exact nature that any so-called technician is competent with a few weeks' experience to be entrusted with the responsibility of a diagnostic laboratory is entirely too prevalent. Strange to say, many physicians who appreciate fully the necessity of education and careful training for themselves will lightly employ anyone who claims to be a "bacteriologist" without further investigation. I have more than once received requests from physicians that I take their office nurse for a couple of weeks' training so that they can do Wassermann tests. *The woods are full of this "domestic servant type of technician," and it will require not only education, but something else to correct the situation, fraught with danger as it is to the patient, to the reputation of the doctor and to the esteem in which a very important part of the practice of medicine is held by the rest of that profession.*

For the purpose of protecting the physicians of this state, of aiding good laboratories to maintain their excellence and of helping those not so good to raise their standards, the State Board of Health has, through the State Hygienic Laboratory, instituted a system of inspection and approval of diagnostic laboratories. The procedure is largely voluntary on the part of the laboratories, and has been received with a cordial welcome by the true clinical pathologists of the state. Those laboratories that have the proper equipment in personnel, apparatus and technic used for the work they are doing are given an official certificate of approval. The inspection does not at present cover tissue diagnosis or bio-chemistry, as these seem outside our field, which is that part of the clinical pathologist's activities having to do with the pub-

lic health. *To date, about forty-five laboratories have been certified, and physicians should look for this certificate on the wall of the laboratory they patronize.*

WILLIAM OPHULS, M.D. (Dean Stanford Medical School, 2398 Sacramento Street, San Francisco)—I have read with the greatest interest the manuscript of the article by Robert A. Kilduffe on "The Status of the Clinical Pathologist." It appears to me that Dr. Kilduffe has presented this subject very well, and that the discussion covers all aspects of the situation. I, therefore, have nothing further to add to this symposium, and I am herewith returning Dr. Kilduffe's manuscript.

L. S. SCHMITT, M.D. (Acting Dean University of California Medical School, University of California Hospital, San Francisco)—The yard-stick with which to measure relations between medical units of whatsoever nature is the benefit derived by the patient. To obtain the greatest benefit, this relation must be characterized by co-operation and team work. Individualism must be submerged.

In order that the best service be rendered to the patient, some one person must be charged with the conduct of the medical service rendered. Obviously, this should be the attending physician or surgeon.

If we accept, as a premise, that the clinical pathologist is a physician skilled in laboratory technique and the interpretation of laboratory procedures, to obtain the desired team work he must have a knowledge of the patient's condition. To do so, he should be versed in the art of clinical observation, but he should also know the uses and abuses of laboratory procedures. If this makes him a "consultant in medicine," it is a change in nomenclature rather than in conditions.

Therefore, the status of the clinical pathologist, as expressed in Dr. Kilduffe's paper, should be that of a specialist to be called upon by the attending physician or surgeon when needed to complete the team and secure the greatest amount of service for the patient.

NEWTON EVANS, M.D. (President College of Medical Evangelists, Loma Linda, California)—The perusal of the paper and the discussions has been most stimulating. The position of the clinical pathologist in the medical profession is a subject needing study, and the essential points in the solution of the problem have been clearly presented. When one approaches the problems with a realization of the paramount importance of the greatest good to the patient, the personal standing of the clinical pathologist will necessarily become a secondary matter.

In my opinion the physician who has, by his earnest work in pathology and laboratory procedures, reached a position of eminence in the medical profession, commands the highest respect. To the young physician the career of the clinical pathologist, for obvious reasons, is comparatively unattractive. In working to a place of prominence in this field he does not have the incentive of the larger income or popular acclaim which come to the surgeon or other specialist or to the general practitioner. In the face of these difficulties the physician who makes his place in the profession as a pathologist is worthy of honor.

RENE BINE, M.D. (San Francisco)—What is a clinical pathologist and what should be his status in medical practice, Kilduffe asks, and so do many others, without apparently reaching an agreement.

The general practitioner looks upon the pathologist—or should—as an individual who has specialized in one branch of medicine—as a consultant to be made use of and called upon to assist whenever, in the course of his professional work, he finds that he requires counsel or assistance in the specialist's chosen field.

The specialist, regardless of his field, must *show* that he can be of help before the general practitioner will call upon him, and the wisest doctor is the one who, knowing his own limitations, is big enough at all times to admit them to himself, his patients, and his colleagues.

In a hospital, where every opportunity for team work exists, the pathologist should have no trouble in receiving the recognition Kilduffe strives for. But his status will depend not upon his title, but upon his ability, personality, and tact. This means a diplomatic attitude toward those of the staff who are not big enough to avail them-

selves at once of his skill, but who can usually be finally won over. It took time for the children's specialist to show that he knew a little more about children than most of the mass of physicians, and so has it been with the ophthalmologist, the aurist, the orthopedist, the radiologist, etc., etc.

In our battle against disease let us make the best possible use of all our resources, and let us not fight to see whether it was the surgeon or the physician or the bacteriologist who "won the war" and "who has priority in the collection of indemnities"; medical historians or patients or whoever cares will decide that soon enough, rightly or wrongly. Do not waste energy telling anybody what he should not do; either help him do it, or show him modestly and tactfully how much better you can do, in the hope that in time he will look to you for that co-operation which you yearn to give him.

A. W. HEWLETT, M.D. (Professor of Medicine, Stanford Medical School)—Dr. Kilduffe, in his interesting paper, has again called attention to the changing conditions of medical practice. More and more the physician in charge of a patient must depend upon others for data concerning the pathological conditions with which he is dealing. X-ray examinations, clinical laboratory reports and examinations by specialists must be accumulated and interpreted in the light of the patient's symptoms. As a rule, the physician in charge can best interpret the various findings, for he is familiar with all aspects of the case. In certain instances the laboratory worker, roentgenologist or specialist may see a meaning in his findings which would escape the physicians in charge, or he may be able to suggest further examinations which might clear an obscure problem. It is plainly his function to furnish this guidance, either as a comment on his report or after making himself familiar with the patient's general condition. But it is difficult to formulate any rule which will apply to all types of clinical laboratory. For the time being it seems to me that the clinical laboratory should be allowed to develop without restrictive rules. Capable men who have something to offer beyond the usual routine will become recognized, and they should be properly compensated.

WILLIAM J. KERR, M.D. (Associate Professor of Medicine and Acting Head Department of Medicine, University of California Medical School)—Specialization in medicine has led to a variety of difficulties, both for physicians and such workers as have been developed to carry on special lines as adjuncts to the work of the physician. It does not seem that there is any clear solution to many of these difficulties. The complexity of the situation has resulted in much dissatisfaction from the standpoint of the public, and a great deal of controversy among physicians. In the beginning the physician who did the more or less simple procedures in the study of his cases was a better physician, because he could apply these findings directly to the problem at hand. As the procedures which may be used in the study of a given case have multiplied and require the skill of those who are specially trained in their manipulation, it has not been possible for the physician or surgeon to devote the time or the study to the technical details. These details, however, may be mastered by those without a medical training; they may be carried on under the direction of a physician who, with his further training and knowledge, may apply the findings to his work without detriment to the patient. However, such technical assistants can seldom be relied upon for interpretation of the findings and must work in close co-operation and association with the physician. There is such a diverse group of individuals who are doing clinical pathology, either as assistants to physicians or as assistants in a general, private or hospital laboratory, that there can be no set standards as to qualifications or salaries at the present time. There are relatively few physicians who set themselves up as clinical pathologists and supervise the work in large laboratories. To my mind, such workers should be on a salary which is ample to provide for the necessities of life, depending upon their training and ability.

It is natural that one who has had a clinical training and can carry on this work must be called upon frequently for interpretation of findings. This might mean a consultation in a given case, but for the average case, or the great majority of cases under consideration, a bed-

side consultation would not be required. Such a clinical pathologist would be of great service to the clinician, and would at the same time improve his knowledge of clinical matters. He should not feel belittled in the knowledge that he is assisting the clinician in solving the problems at hand; he should delight in the fact that he is developing a field of medicine which, due to the great specialization in recent times, has become necessary. It is quite obvious to me that if the clinical pathologist should feel he must be called into consultation at the bedside frequently, he would soon have practically no time to supervise the work in his department. He would be less and less a pathologist and more and more the clinician, and sooner or later would have to choose as to whether he would devote his time chiefly to the laboratory or chiefly to the bedside. He would soon find the situation intolerable, and because of the possible increase in income would probably become a pure clinician. It is not to be denied he might be a better clinician than his fellows because of his training in clinical pathology, but the physician is not worthy of the name unless he keeps abreast of the work in clinical pathology and is able to apply the findings to the problems at hand. He may do many procedures which are more or less routine which are done as a protection to himself and the patient, but he should always see abnormal specimens or findings for his own education and as a further protection to the patient and to himself. Anyone who relies entirely on the laboratory, whether the work be done by a technician or a clinical pathologist, without frequently seeing the results of the tests himself and being able to interpret them at the bedside, is not a physician of the highest type and should be discouraged. The great interest at the present time in laboratory work has led to excesses in the amount of work done with great economic loss to patients. If we as physicians could be more thoughtful of the limited number of procedures which might be used with profit in a given case, we would better serve both the patient and ourselves in solving his problems.

STANLEY STILLMAN, M.D. (Professor of Surgery, Stanford University Medical School, San Francisco)—Dr. Kilduffe's paper is timely and very rightly calls attention to a situation to which not enough thought has been given. There is a growing recognition of the value and need of obtaining the advice and opinion of the clinical pathologist in a large number of cases. In fact, in many institutions and among many groups of clinicians such consultations are frequent. A notable instance is the prominent part taken by Professor Kolmer in the case of President Coolidge's son. Again, it may be noted that at St. Mary's Hospital in Rochester the clinical and pathological laboratories are in close relation to the operating departments. In a number of other institutions also steps have been taken to make the laboratory and the clinical pathologist more accessible. In many of the older hospitals the clinical and pathological laboratories were placed in remote and almost inaccessible situations, and the clinician was not expected, either as a visitor or for purposes of consultation and discussion.

The situation is changing, and it is a desirable thing to hasten the day when the clinician and laboratory man shall work in closer relationship. The rapidity of the change depends largely on the attitude of the laboratory worker. If he desires to broaden his work and develop his interest in the practical application of his laboratory findings with reference to symptoms, diagnosis and therapy, his knowledge will be widely sought on a consultation basis without in any way interfering with the field of the clinician.

The clinical pathologist is presumed to be a man thoroughly educated in all branches of medicine. His chosen specialty should not take him so far afield as to separate him completely from the clinician. Contacts should be made and maintained not alone through the practitioner, but through diagnostic groups and clinical societies. If discussions of the practical application of laboratory findings by radiologist, bacteriologist, pharmacologist, pathologist, serologist, and metabolist were more common, the inclusion of these specialists in consultation work would rapidly spread.

GERTRUDE MOORE, M.D. (Director Western Laboratories, 2404 Broadway, Oakland)—To my mind the train-

ing and aptitude of a clinical pathologist should be both that of a medical technician and a clinical diagnostician. He is the man who knows and supervises the detail of the laboratory, and is at the same time familiar with the strictly clinical side. He is, therefore, the one, before all others, most able to determine tests indicated, to supervise the details of their manipulation and, most important of all, to interpret their meanings in terms of pathology existing in the patient. It is his duty to advise in the use, and method of administration, of certain therapeutic measures. I, therefore, believe that he is in the truest sense a consultant, whether he meets the attending physician at the patient's bedside, in the laboratory, or discusses the case over the telephone. He is the man to whom the worthwhile practitioner looks for aid. In my experience, such consultations are common. They may not be called by that name, and some may bring little financial reward, but they are none the less real consultations, and the clinician is daily realizing more and more their value to him. The time is past when pathology is looked upon as a lowly calling. In my community the pathologist is accorded the same honors and the same consideration by organizations and individuals as is accorded any other member of the profession.

F. R. NUZUM, M.D. (Santa Barbara Cottage Hospital, Santa Barbara)—Dr. Kilduffe's paper points out the uses to which the clinical pathologist and the clinical laboratory should not be put. I believe that these abuses are rapidly becoming much less frequent. I also believe that a proper relation between the clinical pathologist and clinical men is rapidly being reached.

The clinical pathologist must be supplied with sufficient data to give a proper interpretation to any of his findings. The competent clinician does not scorn assistance from the clinical pathologist. He profits through his association with such a man, and in this manner makes himself proficient in the proper evaluation of laboratory work.

In the organization of hospital staffs, proper emphasis must be placed upon these matters, so that men likely to misuse the clinical laboratory in their work may become properly educated.

WALTER V. BREM, M.D. (Pacific Mutual Building, Los Angeles)—It is difficult for a clinical pathologist to discuss the status of clinical pathologists without speaking from his own experience, and in speaking from his own experience he may reveal an unenviable attitude of mind—either an undue egotism or an inferiority complex.

However, I will venture to say that, although we have met with some confusion regarding the place of pathology in the practice of medicine, there has never been any question regarding our professional status, either on the staffs of various hospitals or in the different medical societies, and we have been called in consultation, remunerative or otherwise, as often as is good for our laboratory work. We feel, therefore, that the medical profession has been more than generous, and we believe that the status of the clinical pathologist is a question of personal equation.

We do feel, however, that the problem of stimulating high-class men to specialize in pathology is a much more serious and pressing problem. Indeed, adequately trained tissue pathologists are becoming more and more scarce, and fewer physicians are choosing pathology as a specialty. The reason for this is that the importance of pathology, especially tissue pathology, is not recognized sufficiently well to cause provisions to be made for the adequate compensation of pathologists, that is, for compensation commensurate with that of his clinical colleague of equal ability. Moreover, when efficient and honest laboratory service is available many physicians and surgeons send their work elsewhere because of smaller fees or direct or indirect rebating. This tends to depress the fees of the real pathologist, fees which are already too small, or tempts him to indulge in unethical practices.

Of course, this situation renders the field unattractive for men of the highest ability. When such men are induced to specialize in pathology there will be no question of status.

A. M. MOODY, M.D. (St. Francis Hospital, San Francisco)—I have carefully read the article by Dr. Robert A.

Kilduffe on "The Status of the Clinical Pathologist," together with the appended discussions.

Experience has taught me that it is not only impossible, but impractical for a medical director of laboratory work to spend the amount of time in clinical work necessary to make him really proficient in things clinical, without being correspondingly neglectful of his duty as pathologist.

The degree of helpful application of any medical man's experience, in whatever branch of medicine he may be practicing, will alone determine the status of that individual.

DOCTOR R. A. KILDUFFE (closing)—The main purpose of the paper was not to present any set or individual viewpoint, but to arouse discussion of a problem meriting attention.

Those familiar with the trend of current discussion of medical education and medical practice cannot fail to appreciate that neither have as yet attained the ideal; nor can it be gainsaid that the fullest clinical utilization of laboratory resources as a part of the clinical study of disease is the exception rather than the rule—whether one considers the recent graduate who, too often, looks upon laboratory examinations as the *sine qua non* of clinical study, or the older practitioner who may either give them an unwarranted significance or more or less disregard them entirely.

Laboratory and clinical medicine are not distinct entities; one is complementary to the other. The clinician must know enough of laboratory medicine, of pathology, to utilize its methods wisely and to the best advantage. The pathologist must be sufficiently a clinician to interpret in terms of the patient the abnormalities he demonstrates in the laboratory.

It is well, indeed, to commend the thoroughness of one's colleague and the integrity of his efforts; but it is better to be eager and able to utilize them to the fullest extent.

If the entrance of the laboratory, as personified by the pathologist, into the wards or the problems of clinical medicine as an active participant in their attempted solutions is to be looked upon as an intrusion, then all that is necessary is a sufficient number of technicians to handle the work. It seems more sensible and more conducive to success in the efforts to solve the clinician's problems to expect and demand of the pathologist that he be something more than a manipulative expert. A clear understanding of the situation demands a preliminary clear and distinct differentiation of the pathologist from the technician.

It must be recognized that clinical pathology is a specialized branch of the practice of medicine, and that it is neither limited to nor comprised in the mechanical and more or less automatic performance of technical manipulations in the form of tests. There is some reason to maintain that in the minds of some, at least, the conception of clinical pathology has been limited to tests of one sort or another, and of the pathologist as the performer of tests.

Ewing summarizes the function of the pathologist as:

- "1. To investigate the causes of fatalities . . . to elucidate the causes of disease . . . and to correct partial or erroneous diagnoses.
2. To keep himself familiar with the literature and progress of the medical sciences.
3. To co-operate with the internist in general diagnosis and to serve the surgeon in gross anatomic and physical diagnosis.
4. To serve as a consultant in the wards and the operating-rooms where, by virtue of his special knowledge, he should be able to bring data with which, as a rule, the clinician is less familiar.
5. To supervise the work of the clinical laboratory . . . restraining excessive demands, establishing correct indications for the resort to laboratory tests, and aiding in clinical research."

Doctor, if that addict you prescribe for happens to be a detective, you are in trouble with the law.

If he is not an under-cover agent, but another who really should not have the drug, what about your conscience?

GLUCOSE INTOLERANCE ASSOCIATED WITH ECZEMA

By SAMUEL AYRES JR., M. D., Los Angeles

(From the Department of Dermatology, White Memorial Hospital)

A preliminary report is presented, dealing with the glucose tolerance reactions in a series of thirty-six consecutive cases of typical eczema.

The tests were made in two laboratories, each using the Folin-Wu colorimetric technic.

The fasting blood sugar values in these cases of eczema were not found to be abnormally high except in a few cases.

Very striking deviations from normal were found, however, at the one and two-hour periods, following the administration of the test glucose solution. Of the thirty-six eczema cases, 33.3 per cent showed 200 mgs. or more of glucose per 100 cc. of blood at the end of one hour in contrast with only 5.6 per cent of 300 normal controls, and 16.6 per cent of the eczema cases showed 200 mgs. or more at the end of two hours in contrast with only 0.8 per cent of 253 normal controls.

Of the thirty cases which were tested at the end of three hours, 40 per cent had not returned to a conservative estimate of normal (110 mgs.).

Important discussion by Oscar V. Schroeter, Los Angeles; Kendal P. Frost, Los Angeles; Lorena M. Breed, Pasadena; George Piness, Los Angeles; H. P. Jacobson, Los Angeles.

REPEATED attempts to discover the cause of eczema have led gradually to a realization of the fact that there is no one cause. The conception of eczema as a symptom, rather than a disease entity, is helping materially in solving the riddle of its causation. No one regards abdominal pain as a disease; it is merely a symptom of one out of many possible causes. The mechanism by which the pain is produced, namely, stimulation of the visceral or peritoneal receptor nerve-endings, with passage of the impulse to the brain and frequently to the corresponding cutaneous area, is the same in many conditions. Thus, an acutely inflamed appendix, a gallstone, a tabetic crisis, or a green-apple "tummy-ache" may produce the symptom of abdominal pain, although there will be certain variations in its location, intensity, quality, etc. In the same manner, apparently, a number of causative factors, may, through the medium of the cutaneous vaso-motor system, produce the symptom which is commonly recognized as eczema. Sensitization to the proteins of certain foods, pollens, animal emanations, etc., classed together as allergy, constitutes one of the major causes of eczema. Improper utilization of fat, especially in infants, has been claimed also to be causative in a certain proportion of cases of eczema. The substances which may produce an eczematous reaction through local irritation are too numerous to mention. Poison oak, lacquer, dyes, chemical agents of all kinds, are some of the more common examples.

Disturbances in carbohydrate metabolism have long been recognized in a half-hearted way as being responsible for, or at least associated with, eczema in a few instances. Practically none of the textbooks on general medicine, even in the chapters on carbohydrate metabolism, make any especial mention of eczema as a possible manifestation of a dis-

turbed carbohydrate metabolism, and the current texts on dermatology are equally silent on this point.

The first scientific work of any importance establishing a relationship between eczema and disturbed carbohydrate metabolism was the recent report by McGlasson on the fasting blood sugar in a series of 158 cases of assorted dermatoses, mostly of an eczematous type. Of the entire series of 158 cases, 139 cases, or 87.9 per cent, gave fasting values of 120 mgs. of sugar or more per 100 cc. of blood. Between 90 and 100 mgs. would probably be considered an average normal reading. McGlasson groups his cases according to the clinical appearance at the time of examination. Thus, of the group of 44 cases of seborrheic dermatitis, 77.3 per cent gave readings of 120 mgs. or more; in the flexural dermatitis group, comprising 32 cases, 90.6 per cent were at 120 or above; in the "toxic rash" group of 39 cases, 87.2 per cent showed values of 120 or above, and in the group of 22 cases showing vesicular eruption of the hands, feet, and crotch, 77.2 per cent were above 120 mgs.

All of McGlasson's sugar determinations were made in one laboratory, using the Gradwohl gravimetric method in the majority of the cases, although Gradwohl's modification of the Lewis-Benedict colorimetric method was used in many of the cases. Both methods were used simultaneously in ninety tests with very close agreement between the two methods, the average for the gravimetric being 133.4 mgs. against 135.2 mgs. for the colorimetric method. McGlasson found that many of these cases improved rapidly on a low carbohydrate diet even when no local treatment was applied.

The present study was undertaken in order to examine in more detail the nature of the carbohydrate metabolism in typical eczema. The exact definition of what constitutes "typical eczema" is rather difficult, since an eczematous eruption, if untreated, may pass through a number of phases, sometimes as many as six or seven. Thus, there may be at first simple erythema; later, edema; then vesiculation, exudation, crusting, and, if the inflammation subsides, desquamation; or if the inflammation continues in a subacute form, thickening or lichenification. The alterations brought about by treatment proper or improper, and by occasional pus infection, still further complicate the picture. It does not seem possible that any one phase can be singled out as typical eczema in contrast to the other phases as atypical. Nor does it seem rational to classify too sharply cases of eczema according to the stage in which they are seen. Possibly a month or a year later they may be in entirely different stages.

With these facts in mind it will be seen that erythematous, vesicular, oozing, or lichenified types are included in this series as representing cases of typical eczema, but cases frankly not eczema, such as erythema multiforme, seborrheic dermatitis, or dermatitis herpetiformis, are not included. The tests were made routinely on both private and clinic patients whenever they could be persuaded to submit, and aside from the above restrictions no attempt was made to select the cases. On the other hand, every effort was used to make this series one of consecutive cases, so that the results would definitely

indicate the extent to which disturbed carbohydrate metabolism was associated with eczema.

The glucose tolerance reactions were tested in thirty-six consecutive cases of typical eczema. The cases were distributed between two laboratories, the laboratory of Drs. Brem, Zeiler and Hammack, and the Metabolic Research Clinic of the White Memorial Hospital, each using blood obtained by vein puncture, and each employing the Folin-Wu colorimetric technic. The test meal consisted of 1.75 gm. glucose per kilo of body weight in 300 cc. water, administered in the morning fourteen hours after the last meal; in a very few cases the test meal consisted of 100 gms. of glucose, without regard to the weight. The analyses of the two laboratories showed a general agreement.

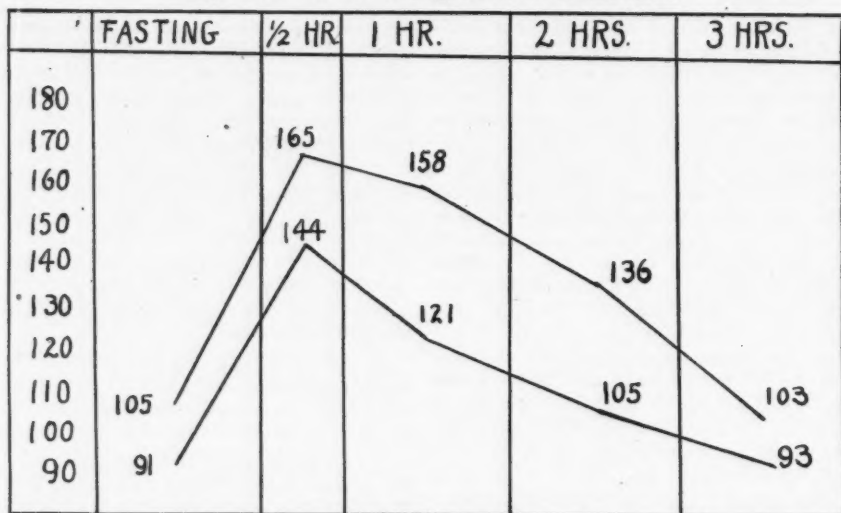
A striking difference is noted in the fasting blood-sugar determinations in this series of thirty-six cases of typical eczema, as contrasted with McGlasson's series of 158 cases of miscellaneous disorders, mostly of an eczematous type. In McGlasson's series, 87.9 per cent gave fasting blood-sugar values of 120 mgs. or more per 100 cc. of blood, in contrast with only 8.3 per cent in this series. It is possible that the study of more cases will raise the average fasting values.

A detailed study of the tolerance curves, however, confirms the impression given by McGlasson's work: namely, many cases of eczema are associated with a disturbance of carbohydrate metabolism. As a basis for comparison of these glucose tolerance reactions in eczema, a large series of tests in clinically normal individuals, recently reported by Horace Gray, was used. These control determinations were collected from recent literature, and represent results obtained according to various standard technics. Of these normal controls, 276 fasting blood-sugar tests were made—158 at the end of one-half hour, 300 at the end of one hour, 253 at the end of two hours, and 103 at the end of three hours. Of the thirty-six eczema cases, thirty were tested at all five intervals, and six were tested only at the fasting—one hour and two-hour periods.

Figure 1 illustrates the sharp contrast between the average curve of the thirty patients who were tested at all five periods, and the average curve of the clinically normal controls. If the six eczema cases who were not tested at the one-half and three-hour periods were included, the contrast would be even more marked, because the average value of these six patients at the end of the first hour was 240.8 mgs. per 100 cc. The one-half-hour period probably would have shown an even higher reading.

Some of the curves in patients with typical eczema coincided with the average normal. Many of the curves showed values of 200 or more even at the end of the second hour, the normal being 105 (Gray's series). The patient showing the greatest abnormality was a man 21 years old who had a papular eczema of the face, neck, and arms of three months' duration. His fasting blood sugar was 219.7, at one-half hour it was 235.5, at one hour 317.4, at two hours 303, at three hours 200. In this case the urine was negative for sugar throughout, although many of the eczema cases showed glycosuria at the first, second, or third hour. One patient who had what was supposed to be an occupational

FIGURE 1. Average curve of thirty eczema cases which were tested at all five periods (upper line) in contrast with average curve of normal cases.



eczema of the hands from soap and water showed 0.9 per cent of sugar in the urine at both the one and two-hour periods, and a blood sugar of 108 fasting, 296 at one hour, and 182 at two hours. Although he made very little progress under local treatment alone, the condition entirely cleared up when he was placed on a low carbohydrate diet.

Of the thirty cases tested at all five periods, the peak of the curve was reached at the one-half-hour period in 53 per cent, at the one-hour period in 36.6 per cent, and at the two-hour-period in 6.6 per cent. Thus, there is a tendency not only to develop a higher peak in eczema, but a delayed rise and also a delayed return to normal. Of these thirty cases which were tested at the three-hour period, only 56 per cent had returned to 100 mgs. or below, the average of the controls being 93.9 mgs.

The high percentage of cases in the entire series of thirty-six eczema cases showing unusually high values at the one and two-hour periods is shown in Figure 2. The fact that 16.6 per cent of the eczema series showed values of 200 or more at the end of two hours, while only 0.8 per cent of the control series showed such value, is one of the most striking evidences of a disturbance in the carbohydrate metabolism in at least some cases of eczema.

The interpretation of these findings must be approached with the utmost caution, since the series is not large enough to permit sweeping deductions. Nor has the investigation been under way long enough to permit adequate observation of the therapeutic benefits resulting from a low carbohydrate diet. In a few instances where the patients have remained under observation the results have been highly gratifying; this accords with McGlasson's observations. Repetition of the tests following a period of low carbohydrate diet would be of value in determining the ability of the patient to recover his tolerance for sugar. Whether the decreased carbohydrate tolerance, which occurs in many cases of eczema, is due to some underlying endocrine disturbance or to functional overstrain of the pancreas

from excessive carbohydrate intake is a question for further investigation to decide. A history of an excessive use of sugar or starch is not always obtainable.

It must be emphasized that some cases of typical eczema show perfectly normal sugar tolerance curves. It must be clearly understood that a decreased sugar tolerance is not being urged as the cause of eczema. Subsequent investigation may show that the decreased tolerance per se is the cause of some cases of eczema, and that it is only an incidental symptom of some more fundamental cause in other cases. Protein sensitization is still an important factor to be reckoned with in many cases of eczema, especially in infants. One patient in this series, a boy 12 years old, showed a definitely decreased tolerance, and also gave strongly positive cutaneous reactions to five of the common food allergens among the grains, fruits, and vegetables. Another patient, a man aged 34, gave strongly positive reactions to several pollen and vegetable allergens, but showed a normal sugar tolerance curve.

SUMMARY

1. A preliminary report is presented, dealing with the glucose tolerance reactions in a series of thirty-six consecutive cases of typical eczema.
2. The tests were made in two laboratories, each using the Folin-Wu colorimetric technic.
3. The fasting blood-sugar values in these cases of eczema were not found to be abnormally high, except in a few cases.
4. Very striking deviations from normal were found, however, at the one and two-hour periods, following the administration of the test glucose solution. Of the thirty-six eczema cases, 33.3 per cent showed 200 mgs. or more of glucose per 100 cc. of blood at the end of one hour, in contrast with only 5.6 per cent of 300 normal controls; and 16.6 per cent of the eczema cases showed 200 mgs. or

FIGURE 2. Percentage of abnormal readings.

	FASTING	1 HOUR	2 HOURS
Mgs. per 100 cc.	Per cent of cases 120 or above	Per cent of cases 200 or above	Per cent of cases 200 or above
NORMAL	7.9% 276 cases	5.6% 300 cases	0.8% 253 cases
ECZEMA	8.3% 36 cases	33.6% 36 cases	16.6% 36 cases

more at the end of two hours, in contrast with only 0.8 per cent of 253 normal controls.

5. Of the thirty cases which were tested at the end of three hours, 40 per cent had not returned to a conservative estimate of normal (100 mgs.).

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DISCUSSION

OSCAR V. SCHROETER, M. D. (1002 Union Bank Building, Los Angeles)—Ayres' paper serves to accentuate the conclusion that eczema is only what dermatology and etiology prove it to be, a varying symptomatic manifestation; it is a cutaneous reaction. This reaction has, undoubtedly, a varying basis, due to the different pathologico-chemical state of the blood in different diseases and also to the particular degree of tolerance in various individuals to the same. This latter factor, only, can account for cases of poor sugar tolerance, which show no dermatological reaction. But the answer to the question, "Why does one individual with poor sugar tolerance have eczema and the other not?" is a deeper and more difficult problem of greater value. Various chronic diseases and disorders of metabolism produce eczema. Doctor Ayres has, very accurately, shown one. The therapeutic problem of dermatologists, in the face of an eczema, is to learn the particular basis of the same and treat it, as well as the skin condition locally.

KENDAL P. FROST, M. D. (Pacific Mutual Building, Los Angeles)—We are indebted to Doctor Ayres for elaboration on McGlasson's primary work in this field. I believe that the sugar level is not the only way in which these patients show themselves chemically. I feel that many patients who fall in this group are not entirely expressed in terms of carbohydrate, but that there is a protein element as well. This has been shown by Lorena M. Breed of Pasadena, whose results were published in a large series of cases not primary eczemas, but many of her cases had both disordered protein and carbohydrate metabolism of a type which seemed to point to liver disturbance. This group has recently been brought to our notice and promises to become an important one.

The picture of eczema and dermatitis is so complex that we are always grateful to anyone who is able to throw more light on the subject. Personally, I prefer to follow the French terminology and speak of "the eczemas" rather than in the singular term "eczema."

LORENA M. BREED, M. D. (Pasadena Hospital, Pasadena)—Doctor Ayres has emphasized one constituent only of the blood, blood sugar, in his study of eczema. It might be interesting, and instructive as well, to study the complete blood chemistry in these cases, and also to ascertain in what classes of cases one finds an elevation of fasting blood sugar.

In his work on protein therapy and the non-specific reactions, Petersen reports a constant elevation of blood sugar during the period of anaphylaxis.

The fasting blood sugar is very often elevated in people with a normal sugar tolerance because of a slight acidosis during even the short fasting period between the evening meal and breakfast. In these cases a carbohydrate meal or a dose of glucose will relieve the slight acidosis and the sugar level will return to normal. We often find, during a glucose-tolerance test, a fasting blood sugar level of 200 mgs. or over, and one hour after the per body weight dose of glucose, that it is lowered to 100 mg., instead of being elevated.

Fasting blood sugar is almost always high in lowered liver function, especially in cholecystitis. Only last week

we were called upon to do a blood chemistry for a patient who was awaiting an operation for gall-bladder disease. The blood sugar was 250 mgs. and the surgeon hesitated. After two days on a pureed vegetable diet, the blood sugar was 240 mgs. and the operation was performed. The gall-bladder was thickened and contained stones.

In a study of 250 cases on whom functional tests were done, together with complete blood chemistry on each, high values for blood sugar and uric acid, as well as N. P. N., were constantly found in those cases with clinical evidence of cholecystitis. Of this number twenty were operated and we had the opportunity of seeing, not only the pathological gall-bladders, but that the blood sugar and uric acid returned to normal following the operation.

That an absorption of split-proteins, whether from the intestinal tract, or from some focus of infection, will produce a sensitization of body cells is a well known fact. When we remember that the liver is very closely associated with the perfect digestion of proteins, that it stores sugar, and that one of its most important functions is that of detoxication, it becomes evident that this organ and its various functions must be reckoned with in any case of protein-sensitization, whether manifested on the skin, as in the eczemas, or on the mucous membrane of the respiratory tract. As the histology of the skin and the mucous membrane is the same, we may have eczema in one person, hay-fever in another and asthma in still another, or all three affections in the same person from the same cause.

GEORGE PINESS, M. D. (1136 West Sixth Street, Los Angeles)—From observation of Ayres' charts, I am inclined to believe that most of the cases presented here have an endocrine disturbance associated with their eczema, either having a definite relationship toward eczema or by being simply coincidental. I feel that if the series of patients studied by Ayres were tested to proteins, and by that I mean just at the proper time with properly prepared proteins, a great many of them would give definite reactions. It is an accepted fact that eczema is an allergic reaction and, as shown by the work of Petersen, blood sugars are constantly elevated during anaphylactic periods. Therefore, I contend that probably the cases discussed by the writer are of protein sensitive type and that the blood sugar tolerance tests are not an etiological factor.

H. P. JACOBSON, M. D. (424 South Broadway, Los Angeles)—Doctor Ayres' venture into the study of relationships between eczema and metabolism will serve a two-fold purpose of emphasizing anew the futility of attempting to treat these cases purely as local conditions, and will, no doubt, serve to stimulate others to further study of the problem from the standpoint of etiology.

His observation of an impaired glucose tolerance in patients suffering from eczema represents only one factor in a complex problem, the solution of which is, as yet, incomplete. It is my impression that the abnormal glucose curve in these patients is significant of a type of alimentary hyper-glycemia due to a hepatic deficiency and an inability on the part of the liver to convert glucose into glycogen in normal quantities. These patients almost invariably complain of a chain of digestive symptoms referable to the gastro-hepatic tract, thus lending weight to the presumption that the reason for the abnormal glucose curve in the blood is to be found in the liver.

The nature of the particular hepatic lesion in any given case, of course, varies. In some, it may simply consist of an exhaustion of the organ, brought about by an over-indulgence of carbohydrates and thereby overtaxing the functional capacity of the liver. In others the exhaustive state may be brought about by a focal infection in some remote part of the body or in the immediate neighborhood of the gall tract, surcharging the portal circulation with bacterial toxins and thereby making a consequent extra heavy demand upon the liver and upon its detoxicating function. (The liver is one of the chief detoxicating organs in the economy.) Or, as a result of a generalized degenerative process in the vascular, cardiac or renal system, the liver becomes involved, in which event, not only will there be found an impaired glucose

curve, but the values of the products of the protein metabolism generally will be found altered.

In other words, the fairly constant impaired glucose curve, observed in cases of eczema by Doctor Ayres, should be interpreted in the light of a symptom only, the cause of which must be sought for in every case to enable us to proceed with judicious treatment. That, in turn, implies a comprehensive knowledge of, and skill in, the theory and practice of internal medicine.

DOCTOR AYRES (closing)—I appreciate very much the generous remarks and the valuable suggestions which have been offered in the foregoing discussions. I have merely tried to call attention to the role of the carbohydrates in the problem of eczema.

Carbohydrate metabolism, on the other hand, is intimately linked with other vital functions upon which detailed observation and research must be focussed before the riddle can be solved.

With all due respect to the splendid work which Piness has done in the field of allergic phenomena, I cannot subscribe unreservedly to his statement that "it is an accepted fact that eczema is an allergic reaction."

Some eczemas are allergic reactions, just as some headaches may be allergic reactions, but it would be inadvisable to admit of no other causes. The eczemas on the hands of dishwashers and the eczemas due to various other external irritants are certainly not of the protein sensitive type. On the other hand it would seem quite reasonable that there may be an associated disturbance of both protein and carbohydrate metabolism in some of the eczemas. I would be the last to say that many of my cases did not fall in this category. But, again, I do not believe it has been proved that protein sensitization is an ultimate cause. Certain facts point to allergic reactions as symptoms of more fundamental disturbances, just as in the case of decreased carbohydrate tolerance, and the real solution of the problem lies in the discovery and correction of that primary disorder. Breed's observation on liver function seem to me to offer extremely interesting possibilities.

Again let me emphasize the fact that I am not urging carbohydrate intolerance as the cause of all eczemas; it is only a small but very important factor.

Oxygen Want in Health and Disease—Charles W. Greene, Columbia, Mo. (Journal A. M. A.), discusses the oxygen capacity of the blood; normal alveolar oxygen pressures; the physiology of high alveolar oxygen pressures; the physiology of low alveolar oxygen pressures; the anoxemic crisis; the significance and danger of the asphyxial post-crisis events; the remedy for anoxemia—an artificial oxygen supply; oxygen want in anesthesia; oxygen availability in disease; the oxygen problem in cardiac deficits, and the anemias. He concludes that the administration of oxygen has no advantage to the normal body. Airs of more than 60 per cent of oxygen may produce pulmonary inflammation by local action. Oxygen administration has no physiologic clinical advantage in hemorrhage, anemia, or other circulatory mechanical defects. Oxygen-enriched airs are of life-saving value in all clinical cases of pulmonary obstruction, edemas or other deficiencies that retard the process of oxygen absorption or prevent the full saturation of the hemoglobin of the pulmonary blood. Oxygen administration must be controlled by recognized physiologic methods, must be continual, and must not produce local pulmonary injury. Oxygen administration cannot be successfully pursued except with clear understanding of the type of response to anoxemia and the recoveries on re-oxygenation through the complex and interdependent reactions of the nervous system, the respiratory system, the circulatory system, and the blood. For all these we have in present-day methods and animal verification an accurate scientific basis of determination.

A doctor's widow is looking for a job because her husband lost his savings in a malpractice suit just before he died. Whatever else you do, doctor, protect your wife and children from disasters inherent in the hazards of your profession.

THE USE OF WHOLE LACTIC ACID MILK IN PRIVATE PRACTICE

By JAMES W. CHAPMAN, M. D., Pasadena

Lactic acid milk changes the bacterial flora of the intestine only to a slight extent and this change is not essential for its beneficial action.

Milk, soured by addition of U. S. P. Lactic Acid in the proper amount, seems to have an effect practically the same as that soured by organisms.

The chief advantage of whole lactic acid milk lies in the fact that it is a concentrated food and can be fed to athreptic infants and other below-weight infants, whose tolerance for fat and sugar has been lowered, in sufficient amounts to bring about a gain without causing an intestinal disturbance.

Whole lactic acid milk is not a panacea. I do not believe its use is indicated in normal infants. We have found it to be of greatest value in the feeding of the so-called athreptic infant, although, in some intestinal upsets, its value is unquestioned.

DISCUSSION by T. C. McCleave, Oakland; Paul S. Barrett, Fresno.

NO NEW facts are presented in this paper. It was written because we thought it might be of more or less general interest to relate some experiences with the use of whole lactic acid milk in private practice, where conditions are vastly different from those found in hospitals and institutions where most of the work with soured milk formulae has been done.

At the outset it might be of some interest to describe briefly the historical background of soured milk and its use as an article of diet. It has been used extensively among all peoples and in all climes for untold centuries. As a food for infants and invalids it has been used by the Armenians and other Near Eastern peoples quite as long as the well-known matzoon.

Metchnikoff attributed the sturdy health and longevity of certain of the Balkan peoples to their extensive use of soured milk as food. His observations and investigations gave a tremendous impetus to the use of soured milk and to the souring agency, the so-called *B. bulgaricus*. Metchnikoff attributed the beneficial result following the use of sour milk to the organisms souring the milk, stating that they brought about a change in the bacterial flora of the intestine. For many years soured milk and the various organisms capable of souring milk were given for no other purpose than to bring about a change in the bacterial flora of the intestine. Beneficial results were explained on such a basis. First, *B. bulgaricus* held the limelight and Bulgarian tablets were prescribed at the least provocation; later, *B. lactic acid* and *B. acidophilus* became the organisms of choice for one reason or another, based on not very convincing experimental work.

That there seemed at first glance very good reason to suspect intestinal bacteria of causing many of the diarrheas of infancy and childhood, may be seen when stools are examined during an intestinal upset. Often pure cultures of one organism are found, the commonest perhaps being *B. coli*, *B. welchii*, *streptococcus faecalis*, *B. pyococcus*, and *B. proteus*, and to each one at some time or other has been ascribed the causation of diarrheas in infants.

The result of most of the work done in recent years on the subject of the role of bacteria in the

etiology of diarrhea in infancy, excluding, of course, the dysentery group, has been, I believe, overwhelmingly against the opinion that they have much to do with it. Their presence in more or less pure culture seems to be rather an effect than a cause. The intestinal mucosa, damaged by too much or improper food, seems to be unable to exert its normal inhibitory power over the growth of these organisms.

Veeder some years ago worked on the problem, and his conclusions were that bacteria had very little to do with the vast majority of diarrhea and intestinal upsets occurring in infancy. Howland and Marriott seemed to hold the same views. The work of Davison and Rosenthal seems also to belittle the role of bacteria in causation of diarrhea in infancy. A report of work done by investigators in various parts of England on the bacteriology of normal and diarrheal stools in children is perhaps most convincing. These investigators were unable to find evidence that bacteria usually found in normal intestines are ever the cause of diarrhea in infancy and childhood. It would seem, therefore, that we must conclude that, while it is conceivable that the bacterial flora of the intestine might play a part in the etiology of diarrhea in infancy and childhood, it has never been proved that they do.

If bacteria have nothing to do with the etiology of the majority of the diarrhea of infancy and childhood, we must discard Metchnikoff's theory and look about for some other explanation for the beneficial results following the use of soured milk. In 1902 the *Jahr buch für Kinderheilkunde* carried a report of the use of acidified milk in infant-feeding. In 1909 M. Klotz, in the same journal, reported that acidified milk had a favorable effect on fat protein and mineral absorption. We do not see reports in the literature of acidified milk being used again in infant-feeding until 1918, when Marriott called attention to its advantages.

Marriott was engaged at the time in investigating the reasons why an infant's tolerance for cow's milk was less than for woman's milk. He concluded that the reason was that the cow's milk was so much richer in buffer substances. These buffer substances required so much acid to neutralize them that the acidity of the gastric juice was lowered to a point where it did not properly function. He thought that if cow's milk were acidified, much more could be given at a time without causing a gastro-intestinal upset, because the buffer substances would be to some extent rendered inert before entering the stomach, and the acidity of the gastric juice would not be changed to any great extent.

The initial process of digestion in the infant's stomach depends on the HCl secreted by the gastric glands. Normally, the amount secreted is optimum for the digestion of breast milk. Breast milk, compared with cow's milk, is highly acid, that is, it has a comparatively high P_h index—about three times as high as cow's milk. Theoretically, at least acidifying cow's milk, with an amount of acid that would bring the P_h index up near that of breast milk, would be a great aid to the digestion and assimilation of cow's milk.

With these ideas as his guiding principles, Marriott began working with cow's milk, soured by incubating in it a pure culture of *B lactic acid* aero-

genes. To make up the difference in the carbohydrate content between cow's milk and breast milk and so increase caloric value, cane sugar or the dextri maltose was used. Later, karo was used almost exclusively. Karo syrup was used for the reason that, being a mixture of several sugars, it should be ideal for the purpose, containing, as it does, dextrin 55 per cent, maltose 30 per cent, and glucose 15 per cent. The readily absorbed and difficultly fermentable dextrin and glucose is nicely balanced against the easily fermentable maltose, making a mixture that is not conducive to diarrhea; in fact, surprisingly large amounts may be given without getting into difficulty.

The Mixture Described—Cow's milk, soured by incubating in it bacteria and an easily assimilable carbohydrate, has a P_h index very nearly approaching that of breast milk and a caloric value per ounce equal to that of breast milk. The results obtained from the use of the mixture in the St. Louis Children's Hospital and the Washington University showed very conclusively that it was of great value, if not in all feeding cases, certainly in those most difficult of all the atreptic type.

After leaving the hospital and attempting to use cow's milk soured bacterially, all manner of difficulties were encountered. The question of which bacteria to use in souring the milk was a big one. Contamination and death of the cultures, through lack of proper facilities for handling, occurred frequently. The age, purity and viability of commercial cultures varied, and consequent variations in acidity resulted. Often the expense of cultures or of milk soured commercially was an item to be considered. In many homes the cultures could not be handled properly, the question of temperature and contamination being too much for the average mother. The acidity of the milk was never above suspicion. It seemed to me that unless the acidity of the milk is more or less constant, much of its benefit is lost. Frequently enough to keep up our interest, milk could be soured in the home under conditions which made it dependable, and in these instances the results were uniformly good. On the whole, however, the use of milk soured bacterially outside hospitals seemed to me very unsatisfactory. Influenced by others who claimed to have obtained good results from their use, alleged pure cultures of bacteria in various forms—liquid, jelly, and tablets—were used, but no good results were obtained that could be attributed to the cultures. As a matter of fact, none could be expected from their use because acid must be present in cow's milk prior to introduction into the infant's stomach if we expect to reduce the content of buffer substances in cow's milk and so protect the acidity of the gastric juice.

The acid content of milk soured in commercial laboratories is rarely ever above suspicion. It is, of course, possible to obtain milk soured in commercial laboratories, but so far we have no evidence that convinces us that they can be used to accomplish our purpose. One seldom finds in such laboratories workers who really get the clinician's point of view. Most of them stress the point that their product changes the bacterial flora in the intestine, but, as has been pointed out, we do not believe this

to be of much importance in dealing with intestinal upsets of children. Bacterially, soured milk will vary in acidity between wide limits according to the bacteria used. To produce a milk soured bacterially, in which the acidity is proper and constant day after day, requires a scrupulous attention to detail, which is beyond most commercial laboratories. Most of the commercial soured milk has an exceedingly sour taste which often results in the infant's refusing to take the milk, and in some instances this has been known to prejudice a certain type of mother against the milk, which naturally complicates matters.

In the face of such difficulties, we came to the conclusion that lactic acid milk, as produced by incubating in it certain bacteria, could not be used as extensively as it should in private practice. Some diarrheas could be controlled with protein milk, and the infant could be made to gain for a time by adding carbohydrate and a little fat, but this scheme had its limitations and we were soon forced back to a sweet milk formula. In certain types of cases as soon as a sweet milk formula was given, a stationary weight resulted, and if then enough carbohydrates and fat were added to bring about a gain in weight, greasy stools returned.

The so-called athreptic infants presented, and for that matter do now present, the greatest problem. All pediatricists are only too familiar with the infant who will not gain unless given an amount of food which, even if continued a short time, will bring about an intestinal upset. An infant, in other words, who requires more food in order to gain weight than it can assimilate without going beyond the limits of its tolerance. We felt that if these infants could be given whole lactic acid milk, they would all gain weight and their tolerance to fat and sugar could be increased.

It was suggested to me by J. F. Perkins of Dallas, Texas, who, under Marriott at St. Louis, had been a pioneer in the use of whole lactic acid milk, that U. S. P. lactic acid could be added to sweet milk and used exactly as bacterially soured lactic acid milk was used. This idea came to him from Marriott, who, as a result of some work on the acidity of the contents of an infant's stomach, came to the conclusion that the acid was the important factor in sour milk—not the souring agents.

In the choice of an acid to use in souring milk, Marriott was governed by several considerations. Hydrochloric acid, since it is already present in the stomach and is the very acid we wish to protect by acidifying the milk, suggested itself first. It is, however, an inorganic acid and must be neutralized and excreted and might in time become a burden to the body—might even result in acidosis by depleting the body bases. Other organic acids, such as acetic, citric, and butyric, tend to cause diarrhea. Lactic acid seemed most free from disadvantages. Several of the acids named have been used by other investigators, namely, hydrochloric acid by Faber, and citric acid by Hess, and their reports have been favorable, and it may well be that further investigation may show them to be the acids of choice. In the light of the evidence we now have, we believe that lactic acid is the safest, being completely oxidized, requiring no neutralization in the

body, and in the amount necessary to raise the P_h index of cow's milk to the proper point, exerting no harmful effect on the gastric intestinal tract.

The method of souring milk with U. S. P. lactic acid follows very closely that suggested by Marriott. If certified milk is used, no sterilization is deemed necessary, but if ordinary raw milk is used it is boiled five minutes. While boiling, the milk is stirred to prevent the formation of a scum. If such a scum does form, it is removed before the acid is added. After boiling, the milk is allowed to cool, because if acid is added while milk is too warm it will clot in large curds, which will interfere with its passage through the nipple.

U. S. P. lactic acid is used 4 cc. to each 500 cc. of milk, or approximately sixty drops to each pint. The acid is added slowly, one drop at a time, with a medicine dropper. While the acid is being added, the milk should be stirred gently. It is important that the milk be cool, that the acid be added slowly, and that the milk be stirred while adding acid, otherwise large curds will appear. Such curds do not render the milk unfit for use, but they do clog the nipple holes. Vigorous shaking will usually break them up.

If properly made, the mixture should be smooth and homogeneous, and should have the taste and odor of ordinary buttermilk. The exceedingly sour taste of most bacterially soured milk is absent. The P_h index is about that of breast milk, $P_h 4$. Carbohydrate is added to suit the needs of the individual infant—usually about 2 or 3 per cent. Karo corn syrup, dextri maltose, and cane sugar have been used—the two first named most frequently and about equally; the latter only when the others seemed not to be well tolerated. Milk sugar is never used because, not having a sweet taste, the sourness of the milk is not decreased, and also because it probably is not assimilated to the degree that the other sugars named are. The amounts of carbohydrates varied, of course, with the individual's needs and tolerance. In some infants badly undernourished, surprisingly large amounts may be given without harmful results. As a rule, however, we rarely give as much as the usual 3 per cent, finding usually that a satisfactory gain can be brought about with a small amount of sugar. The sugar is always dissolved in warm water before it is mixed with the milk; this facilitates mixing. If the infant is taking cereal, very little or no other carbohydrate is given unless the infant is badly undernourished.

All directions for preparation of lactic acid milk are written in detail, and we convince ourselves that the mother or nurse understands the reason why the acid is added before any attempt is made to prepare the formulae. Usually the lactic acid is not diluted, for the reason that the amount the infant would ordinarily take does not seem to be in excess of his ability to digest it. Never more than a quart is given in twenty-four hours. We believe that if more calories than are represented by one quart of milk, with additional carbohydrates, are required to bring about a gain, other food in the shape of cereals, soups, etc., are indicated.

It is not to be understood that whole lactic acid milk is used wherever and whenever lactic acid milk seems to be indicated. In severe diarrheas or

in cases where infants seem to have had their tolerance for fat or carbohydrate greatly decreased, skimmed milk with no sugar added is used—the fat and carbohydrate being added as conditions permit. In such cases where there seems to be an unusually low tolerance for carbohydrate, corn starch is often used, as it seems to be more easily borne than other forms of carbohydrate; usually a 3 per cent solution is used, although we have used it up to 6 per cent, which is rather thick.

It has been our experience that no infant will for long refuse lactic acid milk. Often it is refused at first, but if persistently offered it will be taken quite as eagerly as any other food. A certain type of mother, familiar to all, often is greatly alarmed at the infant's refusal to take the milk, but after being assured, sometimes repeatedly, that the baby will finally take the food, she goes on with it.

We have given lactic acid milk, with few exceptions, to abnormal feeding cases only; that is, to infants suffering from acute or chronic gastro-intestinal disturbances. It has always seemed to me that the simpler a formula could be made, the better for everyone concerned—the infant, the mother or nurse, and the pediatrician; infants showing a steady satisfactory gain on a sweet milk formula are left alone. As a matter of fact, we have noted in several instances where normal infants were given lactic acid milk colic was more frequent than when sweet milk formulae were given, the colic usually being relieved when a change to sweet milk was made. It may well be that the colic was due to some other factor or factors other than lactic acid. We have not sufficient data to say positively; the above is an impression only.

After acute intestinal upsets in which protein milk has been used, in changing from protein milk to sweet milk, a lactic acid formula is valuable. We have had less trouble when it has been used between protein milk and sweet milk than when the change was attempted without it. In some cases, where it seemed indicated, we have used a formula suggested by John Howland and called by him "Reinforced Protein Milk," which is made by adding the curd from a quart of sweet milk to a quart of lactic acid milk made from skimmed milk. With his formula, carbohydrates are necessary—if not at first, at least within a few days, if a weight loss is to be avoided.

Lactic acid milk, made by souring whole milk or skimmed milk with U. S. P. lactic acid, has been used by us in approximately 50 per cent of the abnormal feeding cases seen in the past year. A number of normal infants were given lactic acid milk; some were fed lactic acid milk, so that we might use them as controls; others because lactic acid milk seemed safest because of their geographical location, lack of facilities for cooling milk, and for other like reasons. In a few of the normal infants fed lactic acid milk, colic, or what seemed from the descriptions to be colic, developed. In no case was it accompanied by a gastro-intestinal upset, and in every case a return to a sweet milk formula stopped the symptoms promptly. We have considered here only the cases in which lactic acid milk seemed definitely indicated. These number fifty-one. Thirty-two are from our private practice, and nineteen are from

two clinics. The cases from the clinics were included because the milk in every case was prepared at home with no personal supervision. A number of other infants were given lactic acid milk, but they are not included because they were seen so few times or so irregularly that the results have no meaning. In only one instance do we know definitely that a diarrhea developed while lactic acid milk was being given, and in this case, in our absence, the infant came under the care of another pediatricist who changed the formula.

	No.	Average Age	Average length of time on W. L. A. M.	Average Weekly Gain
Private cases.....	32	5½ mos.	42 days	8¼ oz.
Clinic cases.....	19	4 mos.	45 days	7½ oz.

Two cases are described in detail:

CASE 1. Baby L.; age 3½ months. Birth weight, 7¼ pounds; breast fed, two months; then Eagle Brand for two weeks; stools became loose, green with mucus and curds; changed to Mellin's Food; stools improved but did not gain. One month ago changed to cow's milk formula but has not gained; each time formula strengthened an intestinal upset followed; now at 4½ months the weight is 9½ pounds; has three or four greenish, yellow stools a day which contain mucus and protein curds. Because of the clear evidence of lowered tolerance for fat and sugar, skimmed milk acidified and diluted with plain boiled water was given. The first week no gain was recorded, but neither was there a loss; the stools improved, became yellow, smooth and pasty, whereupon whole milk was used but no carbohydrates. The next report, made one week later, showed a gain of 6 ounces. One per cent carbohydrate in the form of Karo was added and the next week a gain of 13 ounces was recorded. The next week the mother reported baby constipated. Carbohydrate was increased to 3 per cent and prune juice was advised. April 3 the weight was 10 pounds 8 ounces. Approximately one month later, May 1, the weight was 13 pounds. June 5, the weight was 15 pounds 5 ounces; July 10, the weight was 16½ pounds. The baby at this time was 7 months old. Lactic acid was discontinued and a diluted sweet milk formula given with soups and cereal. No intestinal disturbances were recorded after lactic acid milk was given except the light tendency toward constipation at first, which was overcome by more carbohydrate and prune juice. At one year the baby weighed 20 pounds 15 ounces, and measured twenty-nine inches in length.

CASE 2. Baby K. B. S.; age 4½ months. Birth weight, 8 pounds 1½ ounces; present weight, 10 pounds 6 ounces; was on breast for one month; did well; changed to four-hour schedule and then weaned in a short time because milk supply seemed to be failing; since has lost weight. Has been on Mellin's Food, Eagle Brand, Mrs. Alberty's food and modified cow's milk formula; did not improve on any; constipated since he has been on cow's milk; before on proprietary foods stools always watery, green; cried a great deal. Examination revealed nothing of importance except very thin, emaciated infant and certain degree of anhydremia-turgor being slightly reduced. Put on W. L. A. M. formula of 32 ounces: Six and one-half ounces five times a day, 3 per cent carbohydrate. In week following, infant gained 12 ounces; in next two weeks gained 27 ounces. In the 2½ months he remained on the lactic acid formula he gained a total of 5 pounds 9 ounces. Lactic acid was discontinued and the baby put on sweet milk formula with cereal gruel and soup. At 8½ months his weight was 19 pounds 6 ounces.

These two cases are typical. Other cases might be detailed in which most astounding gains appear. In one which occurs to us there was a gain of 18 ounces in one week and with no evidence of nutri-

tional edema and no intestinal disturbance, but such cases are not as typical as the two detailed are.

SUMMARY

1. Lactic acid used in infant-feeding seems to make its first appearance in the literature in 1902. In 1904 another report appears in which it was claimed that the addition of lactic acid to the food of infants resulted in distinctly better assimilation of all food elements from the gastro-intestinal tract.

2. Marriott, in 1918, after working with cow's milk in which lactic acid-producing organisms had been incubated, came to the conclusion that the acid, by removing the excess of buffer substances in cow's milk, rendered it easier of digestion.

3. Lactic acid milk changes the bacterial flora of the intestine only to a slight extent, and this change is not essential for its beneficial action.

It is almost impossible to successfully use bacterially soured milk in private practice except in a few cases in which conditions were exactly favorable. Milk soured by addition of U. S. P. lactic acid in the proper amount seems to have an effect practically the same as that soured by organisms. Lactic acid seems preferable to HCl and other inorganic acids, for the reason that it does not require neutralization in the body and can be almost completely oxidized in the body. There is the danger in the use of inorganic acids that they might, if used over a long period of time, deplete the bases of the body to the extent that an acidosis results.

The chief advantage of whole lactic acid milk lies in the fact that it is a concentrated food and can be fed to athreptic infants and other below-weight infants whose tolerance for fat and sugar has been lowered in sufficient amounts to bring about a gain without causing an intestinal disturbance.

Whole lactic acid milk is not a panacea. I do not believe its use is indicated in normal infants. We have found it to be of greatest value in the feeding of the so-called athreptic infant, although in some intestinal upsets its value is unquestioned.

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DISCUSSION

T. C. McCLEAVE, M. D. (Medical Building, Oakland).—Sour milk preparations are very widely used in the dietary of many different peoples and have had ascribed to them, by certain medical writers, nutritive properties not found in fresh milks. The Metchnikoff propaganda for soured milks attracted general attention because of his authoritative position as a bacteriologist, although his views on the subject were soon shown to be extravagant.

He believed the beneficial effect of soured milks to be due to the contained *B. bulgaricus*, and, as the sour taste is objectionable to many persons, pure cultures of this organism were often given, instead of the milk, in digestive disturbances considered suitable for treatment by this means. Later, *B. acidophilus* became the popular organism, largely displacing *B. bulgaricus*.

As stated in the paper, however, the work of Howland and Marriott and their associates appeared to show that the presence of any particular organisms in the digestive tract was not the important factor, but that to the high lactic acid content of the milk was due the benefits which, undeniably, follow its use in certain dyspepsias of infants and young children at least, and the difficulties encountered in the preparation of soured milks, by the addition of bacterial cultures, have been obviated

by the simple addition of suitable amounts of lactic acid, or, less commonly used, hydrochloric acid.

There can be no question that milk thus acidified is very valuable in certain feeding cases which do badly on ordinary milks. The taste is objectionable, however, and mothers are loth to feed it, but, fortunately, although cow's milk is rich in buffer substances, most healthy babies can digest it perfectly well when suitably modified and boiled, and acid milks are not generally necessary.

PAUL S. BARRETT, M. D. (Bank of Italy Building, Fresno, California).—For a considerable period of time the technical difficulties in the preparation of fermented or acid milk formulae made them suitable only for use in institutions. With the change to the simple addition of lactic acid, however, the home preparation no longer presents a difficulty, providing the instructions are followed. It is my custom to boil all milk used and instruct the mother not to add the lactic acid until the milk is thoroughly cooled. Then, by adding the lactic acid drop by drop, stirring with a glass rod, a smooth, non-curdled mixture is obtained. It is also important not to heat the food above 100 degrees F. before a feeding, in order to avoid curdling.

Occasionally, in feeding a mixture according to Marriott's formula of a dram to a pint, the mother reports that the child vomits after every feeding. It is often advisable to decrease the acid content for a few days and then gradually increase it again.

It has been generally proven that lactic acid facilitates the digestion of fats but not the sugars. Experience shows, however, that it is possible to bring the carbohydrate up to a higher per cent than has heretofore been practical.

Recently, I have been using the lemon juice milk as advocated by Hess of New York with similar results; both mixtures, with their added carbohydrate, being perfectly palatable to most infants. The mothers, almost without exception, become interested in the procedure, and, after a few weeks' trial, become enthusiastic over the "sour milk feeding."

Finally, I wish to thank Doctor Chapman for bringing the attention of physicians to a method of feeding, which, while not a panacea, is certainly another valuable addition to the management of the so-called difficult feeder.

DOCTOR CHAPMAN (closing).—It has not been my experience that infants will long refuse milk acidified with U. S. P. lactic acid. Such a difficulty was common with the use of bacterially soured milk. I explain to the mother exactly why the acid is added and what to expect from its use. I have encountered practically none who objected to its use.

It has been shown quite conclusively, I believe, that very often, when an infant's tolerance for fat has been lowered, the tolerance for sugar is lowered to some extent, and, when the tolerance for fat is raised, more carbohydrate may be taken. I do not believe that citric acid will prove to be as satisfactory as lactic acid in infant feeding for the reason that the acidity of lemon juice varies, and danger of a gastro-intestinal upset is greater than in lactic acid milk.

I would like to say, finally, that, while I do not believe that soured milk will displace the simpler formula of cow's milk, water and carbohydrate, I do believe that it has a very definite place in the armamentarium of the physician who feeds infants. It is, perhaps, the most valuable addition to infant feeding since Finkelstein's "Eweiss" milk was introduced. With the proper use of w. l. a. m. and protein milk, there are practically no feeding cases that cannot be successfully handled.

The fact is that, while babies born today have many times more chance of living to maturity than they did twenty-five years ago, the person of 35 today needs help to keep as many years ahead of him as had his grandfather when he was 35 years old. The failure is that of the individual—not of medical science or physicians. Today man has everything but himself working in his favor for health and longevity.—William G. Exton, M. D.

Well, well, old fellow, you look half dead. Why don't you take a vacation, or *have* you?

X-RAY OF THE URINARY TRACT, WITH REPORT OF A CASE OF CONGENITAL UNILATERAL KIDNEY

By FRANCIS B. SHELDON, M. D., Fresno, Calif.

Review of literature.

Technic of combined radiologic and urologic diagnosis discussed.

For literature quoted, see Quarterly Cumulative Index, A. M. A., or Index Medicus.

Frank discussion by George W. Hartman, San Francisco; H. E. Ruggles, San Francisco; Edward N. McKee, Los Angeles; Charles M. Richards, San Jose.

THE manner of examining the urinary tract with the x-ray, may, like ancient Gaul, be divided into three parts. First, films taken without cystoscopy and catheterization of the ureters. Second, films taken after cystoscopy and the catheterizing of the ureters. And third, films taken after an opaque media has been thrown into the kidney cavities and the ureters. This same opaque media injected into the bladder oftentimes will give us useful information.

Good films of the urinary tract should show the outline of the kidney shadow, the border of the psoas muscle, the lower ribs, and the transverse processes of the lumbar vertebrae, and the lower part of the tract, the pelvis must be well shown also. From films made when the ureters have not been catheterized, we are able to get information regarding the position of the kidney in its relation to the surrounding body structures, the size of the kidney, and whether or not there is any opacity casting a shadow suggestive of a calculus. Before such a shadow is diagnosed as being a calculus, the relation of the shadow to the position of the other shadows of the urinary tract must be considered.

With the ureters catheterized, using a catheter that is opaque to the ray, with a single film the relation of any opacity to the urinary tract may be fairly well located. With shifting of the tube between exposures and a double exposure on the same film, or with stereo films, the location may be made more exact. In the case of a shadow of an opacity near the ureter, it must always be borne in mind that the ureter may be very much dilated, and a calculus within the ureter in such a case may not be in contact with the catheter. In these cases a final diagnosis must be made only after a good ureterogram has been made, using an opaque media in the ureter.

The most information regarding the urinary tract is obtained when the entire tract is filled with an opaque solution. The shadow of this opaque solution gives us the size, shape, and position of the various parts of the tract. Various anomalies are found with these films that otherwise would not be known. A kidney may give a good function test and at the same time be discharging much pus. When the roentgenogram is made it is found that there is a double pelvis in the kidney, one of which only is functionless. With two films or a double exposure on the same film after shifting the tube, it is possible to determine strictures of the tract. Pathological changes may take the form of contractures, displacement of the media by new growths, or dilatation of the pelvis, calyx, or ureters.

The dilation of a hydronephrosis may be confined

to a single calyx, or it may include all the calices. It may be that there is only a slight blunting of the calices, seen in the beginning stages, or it may be the terminal stage when the pelvis proper has swallowed up all of the calices. With the double-exposure film the amount of movement of the kidney during respiration is well shown; also the movement with change of posture.

The ureterogram should show dilatation, if present, and kinks or strictures when present. The normal ureter will show peristaltic waves. These latter must not be mistaken for strictures. Here again the two exposures will assist in making the diagnosis. Certainly, a diagnosis of ureteral stricture should not be made from a single film.

Oftentimes the presence of diverticulum of the bladder can be determined only from the cystogram of the filled bladder.

TECHNIC

In private practice I find that most of the patients sent in for urinary tract examination with the roentgen ray are sent with no preparation whatever. When suspicious shadows are found in these cases a recommendation that they see a urologist for cystoscopy is sent, with the report of the findings, to the referring physician. In my own work I do not use compression other than that which I get by having the patient draw in the abdominal wall as much as possible. Double screens at a distance of twenty-one inches from the target are used with high milliamperage and an exposure of one-tenth to one-fifth of a second.

Exposures of the injected kidney are made while the urologist continues to fill the pelvis, for we have found that if the injection is made at about the right rate the return flow is able to care for the overflow, and the peristaltic waves are then seen in the ureters; also the cavity of the kidney is more sure of being full. In our work a 25 per cent solution of sodium bromide is used for the opaque medium. Most always we fill both kidneys for comparison. When the patient complains too much of the discomfort the injection is often stopped, even before the exposure is made. In these cases very often the outlines of the pelvis and calices are not as clear as they should be. I have also noted that the nearer the kidney is to the normal, the more the patient is apt to complain of pain. Some urologists prefer to inject the kidney under the direct observation of the fluoroscope, and then the injection is continued till the solution is seen to flow down the ureter.

Before the kidney is injected a syringe should be attached to the catheter and an attempt made to empty the kidney of any residual urine. This is especially the case where a hydronephrosis is suspected. In many cases where this is not done the pyelogram is not clear because of the dilution of the opaque solution by the retained urine.

CONGENITAL UNILATERAL KIDNEY

The complete absence of one kidney and the accompanying ureter is rather infrequently met. The atrophic kidney with a partial ureter occurs more frequently. L. Polack (1909) collected from the literature 264 cases and analyzed them. He found

the kidney and ureter both absent in 153 of these. Braasch (1912) reports thirty-six anomalies, of which six were complete absence of one kidney. Morris reports unsymmetrical kidney or extreme atrophy of one kidney, occurring once in 2400 bodies. The left kidney is more frequent than the right. He also reports congenital atrophy to the extent of almost obliteration is rare, occurring three times in 15,904 post-mortem examinations.

Thomson Walker (1914) collected ninety-three cases of uremia or anuria, commencing within a few days after operation, and found that in ten cases there was complete absence of the second kidney, and in eight cases there was complete atrophy of the second kidney. A mortality rate of 19 per cent was due to lack of knowledge of the absence of the second kidney. Today, with the use of the cystoscope and the x-ray, such mistakes should not occur.

REPORT OF A CASE

G. L. Single. Female. Age, 22. Weight, about 90 pounds. Came to her physician for lung trouble. The family history was negative. Patient had had measles; petussis, no sequela; diphtheria in 1920. Some edema of the legs followed. Influenza in 1918, but not seriously ill. Tonsils removed in 1920. Menstruation, regular.

At this time (August, 1921) the physical examination was negative, and she was referred by Doctor C. O. Mitchell for a roentgen examination of the chest, which failed to demonstrate any abnormality.

In October, 1923, she was again seen by Mitchell, and at this time her complaint was a pain below the waist line and most severe when sitting. This pain came on suddenly. Two days later the pain was most severe when lying down, and was mostly on the left side. Physical examination showed a temperature of 98 and pulse of 90. Abdomen flat. In the left inguinal region a mass was felt, some two centimeters in diameter, which was freely movable and tender to pressure. On the right was a firm, smooth mass about five centimeters in diameter, freely movable and easily worked up under the costal margin.

In November the patient complained of pain on the right side, and a small mass could be felt. At this time she was referred to me to rule out a possible opaque urinary calculus.

The film showed a very clear outline of the right kidney, which was quite low, the lower pole being but very little above the crest of the ilium. No shadow of the left kidney could be found. A suspected absence of the left kidney was reported. No evidence of calculus was found.

In December the abdominal pain was constant on the right, over McBurney's point; not connected with the kidney, and worse when lying down.

December 15, Doctor W. W. Cross performed a cystoscopy and catheterized the right ureter. No orifice for the left ureter could be found. Under the fluoroscope, when injected with opaque solution, the right kidney was found to move very freely. It would descend till a kink was formed in the ureter, and then could be readily replaced in its normal position. No shadow of the left kidney could be found on the film at this examination.

The patient was later operated. The right kidney was suspended, and the appendix removed. At this time an intra-abdominal palpation was made to try to locate a left kidney, but none could be found. The patient made a good recovery, following the operation.

This case is reported because of its infrequent occurrence and because there have been such cases operated and the single kidney removed. It is essential that every kidney case have a thorough cystoscopic and roentgenographic examination before any operative procedure is done on the kidney.

Mattei Building.

DISCUSSION

GEORGE W. HARTMAN, M.D. (999 Sutter Street, San Francisco)—Radiologic examination of the urinary tract can hardly be considered complete without a catheterization of the ureters with opaque catheters. This not only serves to eliminate shadow-casting bodies exterior to the tract, but also indicates bizarre positions of ureters and kidneys.

Thomson Walker has recently called attention to calcified lymph glands causing hematuria by pressure on the ureters. An opaque catheter would be of assistance in eliminating such an error.

Many physicians are opposed to bilateral pyelograms. With extreme care in injecting, we have not had any unfavorable reactions while doing this. There is a decided advantage in being able to investigate and compare both sides at one sitting.

A problem which remains to be solved is the more successful handling by x-ray of permeable stones which do not show on the plate. We have observed a number of these recently, negative radiologically, in which the stones were passed after cystoscopic manipulation.

H. E. RUGGLES, M.D. (Butler Building, San Francisco)—As Sheldon has pointed out, careful, painstaking work and complete co-operation between the urologist and radiologist are absolutely essential in the field of genito-urinary diagnosis. By working together—preferably in a hospital—good team work is developed, time is saved, patient's discomfort lessened, and the possibility of error in diagnosis reduced to a minimum.

The radiographic examination is the only method of demonstrating anomalies of kidneys and ureters with certainty. Double pelvis may be suspected cystoscopically if multiple ureteral orifices are seen, but frequently the ureters unite in the lower portion of their course and the real situation only becomes apparent in the films.

Stones which may be invisible on plain films of the kidney region (comprising 15 to 20 per cent of all stones) are at times revealed by pyelography. They may appear as "holes" in the opaque shadow of the pelvis, or by absorption of the bromide solution become visible after the pelvis is emptied.

EDWARD N. MCKEE, M. D. (Methodist Hospital, Los Angeles)—One of the important things mentioned by the author, and on which we place great importance, is the preliminary preparation of the patient. About 90 per cent of the patients present themselves without any preliminary preparation whatever. This causes an increase in expense to the patient, as well as loss of time, because the necessary preparation consumes two or three days. Our method is to have the patient take a half ounce of powdered licorice compound on the evening of the second day before coming to the laboratory for examination. Besides the powdered licorice compound, the patient takes repeated S. S. enemas the following evening, and a plain enema on the morning that he reports. The regular diet is continued up to the time of the examination; with the omission of breakfast on that day.

In the matter of technic, Sheldon failed to tell us whether or not he was using the Bucky diaphragm in his urological examination. I believe that the Bucky diaphragm is quite universally used in kidney examinations; and the other essential is a fine focus tube. We also use a compression canvas band with a basketball bladder. The patient is instructed to take a deep breath, exhale, and hold for the period of the exposure.

The technic that we employ is, spark gap, 4½ inches; milliamperage, 20; distance approximately 22 inches; and time, 6 to 9 seconds, according to the size of the patient.

By co-operation the radiologist and urologist are able to make pictures of the ureter from the kidney pelvis to its outlet into the bladder. The radiologist gets everything ready for the picture after completion of the pyelography. The urologist injects the ureter gently with a 20 cc. glass syringe, as he withdraws the catheter. The moment the tip of the catheter enters the bladder he notifies the roentgenologist, and the picture is taken.

The result will be a true picture of any intra-ureteral tumors, strictures, or kinks, and an illustration of the exact topography of the ureter. The procedure is of value in ruling out many of the various pelvic conditions.

Kidney or ureteral pathology otherwise invisible is dis-

closed by the distention it produces in the pelvis or ureter by appearing as a light or negative area in the injected fluid.

CHARLES M. RICHARDS, M. D. (Garden City Bank Building, San Jose, Calif.)—The importance placed upon preliminary preparation, by the author and others discussing the paper, is not overdrawn. Technically, excellent films can only be obtained when the alimentary tract is well emptied of both solid and gaseous contents.

Patients referred to me from out of town frequently come with little or no preparation, and I often try to save them a prolonged stay or a return trip by doing the work immediately, but more often than not the work has to be repeated because the intestinal tract, chiefly the colon, is full of gas. This condition not infrequently is caused by the conscientious effort of the referring physician to prepare his patient by the administration of saline cathartics, most commonly magnesium sulphate. The best cathartics are the vegetable cathartics, castor oil, and licorice powder.

Then, too, an otherwise good preparation has often been spoiled by unskillfully given enemas, whereby large amounts of air have been pumped into the colon; so that frequently we have purposely omitted the enemas, kept the patient on liquid diet for twenty-four hours, and given the vegetable cathartic, thus producing a quite satisfactory preparation.

The report of the congenital absence of one kidney is very interesting, and only serves to remind us that no useful step of preliminary examination can be omitted with safety when nephrectomy is contemplated.

Sheldon's technic of high milliamperage and short exposures is good for the purpose of eliminating respiratory motion, but naturally eliminates the use of the Bucky diaphragm, which is one of my greatest aids in producing valuable soft tissue films, and high contrasts, which may aid in reducing that percentage of undemonstrable urinary calculi.

DOCTOR SHELTON (closing)—It would seem that the use of six to nine seconds' exposure in the making of ureterograms would give an indistinct hazy outline, because of the peristaltic movement of the ureter when filled. This would be similar to taking that much time for an exposure of the stomach. I have, therefore, in my work preferred the rapid exposure technic. I do not see the advantage of long preparation of the patient, if elimination is started two days before the examination and the intestinal tract is at the same time filled by regular diet. The preparation, as given by Richards, is very good.

Hot Air Comfort—Heating methods, heat transmission, comfort, types of furnaces, and ventilation are discussed by Thomas Hubbard, Toledo, Ohio (Journal A. M. A.). He thinks that Americans are becoming progressively more sensitive to temperature and humidity. The popular demand seems to be for higher radiation capacity in the home, in hotels, and in public conveyances. (What a shock it would be to the heating trade if we accepted a 65-degree standard.) Climatic conditions and sudden variations of weather are naturally very trying, and we invite cold shock by hypersensitiveness. Unhygienic heating, combined with foolish estheticism in clothing (e. g., chiffon to furs), results in acute and chronic diseases of the upper and lower respiratory tract. Catarrhal affections, such as chronic sinusitis, even in young children, are far more prevalent than should be tolerated by an enlightened, intelligent people. Medical progress in the study of causes of such diseases is one of the outstanding features of this age, but treatment and cure are handicapped when the unhygienic habit is in itself chronic. The complexion is the color index of good blood and normal skin circulation. It is notorious that in America the natural color index is fading and the cosmetic index is correspondingly high. The skin, like the respiratory mucosa, is actually damaged by hot dry air (and likewise is the hair) and becomes more liable to chronic diseases. Our present high temperature standard so lowers natural resistance to minor and major infections that restoration to normal health is retarded. The fresh air treatment of hospital surgical cases is testimonial to the healing virtue of tonic temperature and natural humidity in convalescence.

AFFECTIVITY—ITS IMPORTANCE IN PRACTICAL MEDICINE

By CHARLES LEWIS ALLEN, M. D., Los Angeles

Affectivity varies enormously in different individuals. Its roots descend to the lowest strata, it dates back to the earliest beginnings of mental life.

Biologically, it stands in close relationship to instincts and temperament.

That differences in affectivity in different individuals depend upon a difference in their make-up, seems pretty certain.

The affective state exerts a profound influence upon the attitude, the expression and the speech, as well as upon the cardio-vascular and glandular systems, and the body nutrition.

Affectivity varies enormously from person to person, and even in the same person at different periods of his life.

Anxiety is more frequently and clearly accompanied by physical symptoms than any other affective state.

Morbid irritability, excessive lability of mood and inability to control the instincts and affective reactions is a characteristic of psychoneurotics in general.

When phantasy is allowed full play, thinking is not concerned with actualities, but follows the direction indicated by instincts and affects.

DISCUSSION by Edward A. Franklin, Los Angeles; Aaron J. Rosanoff, Los Angeles; Josephine A. Jackson, Pasadena; Joseph Catton, San Francisco; Clifford W. Mack, Livermore.

IN THE consideration of any disease, as to its nature, its course, and its probable outcome, as well as in its management, the wise physician will study the patient as a whole. By no means the least important factor is his mental make-up, particularly on its emotional side. The English word "emotion" is approximately equivalent to the German "affekt," which Ebbinghaus defines as: "Feelings which depend upon the mediation of associatively awakened conceptions, and at once appear in comparatively great intensity, are called affekts." According to Bleuler, every psychic process is divisible into an intellectual and an affective side. Under "affectivity" he considers collectively affects, emotions and feelings of pleasure or displeasure, regarding the term "feeling," sometimes applied to this group, as misleading, since it is used to mean both ordinary bodily sensations and complicated cognition processes, whose elements are by no means clear to us. Affectivity varies enormously in different individuals. Its roots descend to the lowest strata, it dates back to the earliest beginnings of mental life. "It contains everything in the way of feeling tone which the mental processes acquire at the same time that they are passing from simple sense impressions and image formation through abstract conceptions and reflexion to decision and to motor impulse" (Kretschmer). Biologically, it stands in close relationship to instincts and temperament.

The instincts of self-preservation and self-perpetuation through securing food, through the avoidance of danger, and through the sexual impulse, seem to be attributes of life itself, and are present in the lowest forms. Though their manifestations in man have become in the highest complex, they still constitute the impelling force of all his actions. With them are intimately bound up the feelings in the broad sense. In primitive man the instincts were intense and uncontrolled, while the fear of dangers both known and unknown was ever present, and

what ideas he had were under strong affective influence. The mental content is greatly influenced by affects. For this influence, H. W. Maier has proposed the name, "Katathymia." We know that the thinking and the world conceptions of the primitive are much more katathymic than ours. Now, while the mentality of the civilized nations is immensely removed from that of the primitive races, the ascent has been a gradual one, and many minds still retain much of the primitive habits of thought. This is especially noticeable in children and in the mentally abnormal. While we have no exact knowledge as to the cause of the emotions, which are experienced subjectively only, that they are directly connected with some physical process, and that differences in affectivity in different individuals depend upon a difference in their make-up, seems pretty certain. The importance of temperament has long been recognized, and recent studies of Kretschmer seem to show that body-build has quite a close relationship to character, though on account of the great admixture of different racial strains, the physical types are so complex that caution is necessary in drawing conclusions as to this. The relation between the endocrine glands and body structure is undoubtedly close, but as a matter of fact our knowledge as to the internal secretions is as yet fragmentary. We are by no means sure that they are exclusively products of the glands which we have recognized anatomically, and it seems not improbable that many, if not all the body cells, are capable of producing substances which are necessary for the organism. Hence, while we are justified in the opinion that affectivity is intimately related to physical constitution, we cannot make it an affair of any one set of organs.

While in the James-Lange theory of the emotions physical changes are considered the cause, the emotions the effect, the experiments of Pawlow, Cannon and others show that feelings such as pain, hunger, fear and rage, are followed by bodily changes, especially by altered glandular functioning. In their view, this is the result, not the cause of the strongly affective tone which characterizes such feelings. It has been pretty well established that in animals the mechanism regulating the physical expression of the emotions is situated in the archaic portions of the brain in the neighborhood of or below the thalamus, and Cannon locates the center regulating the adrenal secretion close to this. He believes that the impulses sent out from this center pass through the sympathetic nervous system. Emotional excitement in man is attended by many of the signs produced in dogs and cats by stimulating the adrenal center. Under excitement the heart beats rapidly, the blood pressure rises, the pupils dilate, and the processes of digestion cease. Cannon regards it as probable that "the adrenal glands, the liver, and the thyroid are as much involved in the complex of emotional response in the human as they are in the subhuman groups." As we lack proper tests for adrenal and thyroid secretions in the natural state of the body, we cannot get direct evidence of their presence or absence, hence of increased or decreased glandular activity in man. As indirect evidence, hyperglycemia or glycosuria has been noted after great emotional stress, as in football players after a hard

game, in students after a trying examination, in aviators and in citizens after a bombardment, while hyperglycemia has been reported in mental disorder with great anxiety. The influence of strong emotions in hyperthyroidism is pretty well established. By adrenalin injections many of the visceral changes of profound emotion can be produced. Persons subjected to these complained of nervousness, trembling, oppression in the chest, and "feeling the heart beats everywhere," while some athletic students reported themselves as feeling just as they did before starting a race—"all worked up and on edge." One subject said, "I feel as if I were experiencing a deep emotion, but I am not at all." These statements do not point to specific effect of the visceral changes on conscious emotional experience. Since they are similar in widely different feeling states, Cannon holds that they cannot be considered as the source of the feelings experienced. To account for the affective outburst and the features which distinguish one emotion from another, we can for the present form hypotheses only. Cannon suggests that their difference in character may depend upon the "nervous pattern ingrained in the archaic part of the nervous system," and that "when nerve influences flash through these ready but unworn pathways," the result is manifested in the affects, variable and rich in feeling tone, which we know in practice. From the foregoing it is clear that the affective state exerts a profound influence upon the attitude, the expression and the speech, as well as upon the cardio-vascular and glandular systems, and the body nutrition. Conversely, affectivity is strongly influenced by physical causes, notably by disease, witness the anxiety of heart disease, the depression and irritability in digestive troubles, the euphoria of phthisis, etc. Affectivity influences our thinking, in that the force of ideas corresponding to an affect is increased, that of those unrelated or opposed is diminished, so that the tendency is to occupy oneself with those conceptions imposing themselves as important, to the disadvantage of contra-conceptions. The depressed subject is only able to see the disadvantages, the exalted only the advantages of a certain course.

A group of conceptions bound together through having been built up around a strong affect and exerting a lasting influence upon the psyche is called a complex. The assumption that such complexes existing outside the sphere of consciousness are constantly influencing both thought and action, is the central idea in the Freudian psychology, which, stripped of many of its original dogmatic assertions, is taking its place as a useful working hypothesis for the elucidation of some of the problems of psychopathology.

Affectivity varies enormously from person to person, and even in the same person at different periods of his life. It is a most important factor in the character of the individual, determining the quality and speed of the reactions, the strength and durability of the emotions. Jealousy, envy, and pride are at once personal characteristics and affects, while laziness or energy, steadiness and industry or indifference and negligence are based upon the affective make-up. Since the affective potentiality varies so

greatly, affectivity readily oversteps the bounds of normality.

Low affectivity, while perhaps safer, does not make for high accomplishment and may be in itself abnormal. While psychopaths are usually thymopaths, so are great artists, musicians and writers, of whose utility to the world there is no question. Religious conceptions are determined almost exclusively by affective influences.

It is in psychopathology especially that affectivity plays a preponderant role, but it must be considered in all branches of medicine.

Says Kretschmer, "The psychology of the neuroses is the psychology of the human heart in general. He who knows neuroses, knows mankind." The "affect dynamic" point of view must take the chief place in a strictly medical psychology, for in it we have the best working hypothesis for a study of the neuroses, the psychopathic reaction forms, hysteria and the milder schizophrenic and paranoid borderline conditions which are continually confronting all physicians.

The power of suggestion needs only to be recalled. Now, ideas without accompanying affect have little or no suggestive power. "The greater the emotional value of an idea, the more contagious it is." The suggestive influence which one person exerts upon another depends mainly upon a reciprocal affective state. In mass suggestion the affective influences are multiplied many fold, and few can resist the contagion of great religious and political movements, once they acquire a certain impetus.

It is to be remembered that not only thought, but also other brain-controlled functions, the heart, the glands, and unstriated muscle, are under the influence of affects, so are subject to suggestion.

The so-called auto-suggestion depends entirely upon the action of the affectivity upon the logic and the body functions of the individual.

In hypnosis the associations are so limited that only things suggested by the operator are perceived or thought of; hence, those associations desired are more than usually under the control of the psyche. "The hypnotized person comprehends what is expected of him better than normally, and can utilize sense impressions ordinarily too weak for him," so that objects are so vividly conceived as to be hallucinated, while actual perceptions are kept out of consciousness, "negative hallucinations."

Now, we know that in the psychoneuroses suggestibility is enormously increased, hence the peculiar susceptibility to hypnotism. In the Freudian system, the affect-accentuated complex through "conversion," "displacement," or "suppression," is considered the mainspring of the symptoms, so varied and bizarre, of hysteria. Particularly pathogenic are ambivalent complexes—that is, those characterized by an inner conflict which the patient cannot solve, hence suppresses.

While disturbances of the affects may depend upon changes in the brain or in the chemistry of the organism, a certain constitution, usually congenital, seems to be a prerequisite in most cases. The hysteric and the paranoiac are born different from healthy people.

In all mental diseases, the symptoms—at least at some stage—are largely determined by the affective

condition; most marked is this in the manic-depressive group, the affective psychoses par excellence.

Depression is a normal reaction to misfortune; it is only when it is unmotivated, excessive or unduly prolonged that it becomes pathological. In the melancholic all but depressive ideas are suppressed, thinking is painful, and retardation may be so extreme as to give the picture of stupor. A common accompaniment of depression is anxiety, which, however, may occur in other conditions and from various causes. In some cases it is clearly connected with deficient oxygenation of the tissues, as in diseases of the heart, the blood or the respiratory organs. Freud has emphasized its connection with the sexual impulse which, when excited and unsatisfied seems to be "transformed" into anxiety. We know that normal sexuality has a certain anxiety component, and that an orgasm may occur in certain anxious situations, while anxiety attacks may be translated physically as hunger, profuse sweating, asthmatic seizures, diarrhea, vertigo, etc. There are physical causes at present unknown to us which produce depression, the patient being aware of no reason for it. In his search for a cause, he may attach to it some conception, which is clearly an afterthought, but when the falsity of this is demonstrated to him he is apt to make some new connection as long as the anxiety state continues.

Anxiety is more frequently and clearly accompanied by physical symptoms than any other affective state, often by precordial distress, pain running down the left arm, palpitation, pulsation in the abdomen, a "streaming toward the head," pressure, etc., "precordial anxiety." Anxiety tends to raise the blood pressure. An increased tonus of the pharyngeal muscles causes a distressing feeling of constriction which may lead to refusal of food. Depression occurs in various psychoses. With advancing age and the onset of circulatory disturbances, the tendency to anxious excitement increases.

Anxiety is an important accompaniment of phobias and imperative conceptions and acts.

Exaltation may vary from a natural and motivated reaction through simple euphoria, in which the feeling of happiness and well-being is not justified under the existing circumstances and is unduly prolonged to the most exaggerated self-feeling with unbounded increase of the aspirations and pretensions. When to this there is added flight of ideas and motor impulsions, we have a condition of mania. Here lability of mood is the rule, the affective condition varying with the theme, from exaltation to depression, but speedily returning to the basal euphoria. The manic picture may be an episode in many psychoses, but in its typical development is a part of the manic-depressive psychosis.

Since the symptoms just discussed may, in their milder forms, occur with a minimum of mental disturbance they naturally come under the observation of the general practitioner, who should be alive to the possible affective origin of certain puzzling visceral symptoms.

Morbid irritability, excessive lability of mood and inability to control the instincts and affective reactions is a characteristic of psychoneurotics in general, of many of the high-grade defectives, and of those borderline cases which have been brought to

gether under the general name of "Constitutional Psychopathic Inferiority." These last, the "half-insane," constitute one of the most serious problems with which we have to deal. Always dissatisfied, mostly complaining, and often in trouble, they furnish a large contingent of the criminals and "ne'er-do-wells" of the community. They are among the clients of every general physician, often never come under the specialist and can rarely be committed as insane, so remain for years a care to their friends, a nuisance to the community, the drones in the hive of industry, if nothing worse. In the foreground of their characteristics stand affective abnormalities. Even if their intelligence is average or high, it has little regulative influence upon their conduct.

Strong affects may lead to disturbances of consciousness in psychopathic individuals; for example, to the sudden explosions of blind rage, often followed by amnesia, seen in prisoners and in the feeble-minded. In other instances the affect instead of exciting, inhibits, leading to a form of stupor, seen especially in children and in young people when confronted with an emotionally charged situation, such as an examination or other task toward which there is a strong aversion or a sense of impending failure. "Affect stupor." Such situations, inner conflicts and improper attitudes, arising upon the basis of injured self-feeling, are at the bottom of a number of peculiar and anti-social acts of children, as has been abundantly proved by the newer investigations of child behavior.

Under the head of "Psychopathic Reaction Forms" or "Situation Psychoses," Bleuler has brought together such diverse conditions as paranoia, the persecutory delusions of the deaf, querulant insanity, induced insanity, reactive disturbances in prisoners, "primitive reactions," reactive depressions and exaltations, the impulsive insanity of Kraepelin, reactive character alterations, and the whole group of the psychoneuroses. "In any disturbance within the psyche, affects act differently from before and can produce morbid syndromes." "Congenital anomalies, injuries and diseases of the brain, disturbances of nutrition, intoxications and infections, and finally the prolonged action of affects, form, in varied array and admixture, the basis upon which these reactions occur" (Bleuler). It is true that similar reactions may occur in such diseases as schizophrenia and organic psychoses, and are then attached to the proper symptomatology of these diseases. Most of these syndromes are due to the exaggerated action of affects, affectivity being unusually responsive and readily brought to bear upon the associations, while reflective power is defective.

When phantasy is allowed full play, thinking is not concerned with actualities, but follows the direction indicated by instincts and affects. Characteristic of this, the "autistic" or "dereistic" thinking of Bleuler is, that in it conflict with the truth is disregarded, the "logic of the emotions" being followed. While this method of thinking is characteristic of children and primitive people, it is never entirely absent and answers to needs both affective and intellectual, particularly in fields in which we have no exact information (as in religious and philosophical speculations). It is in fact within

limits a prerequisite of intelligence, for out of free imaginings new ways are often developed.

In no form of mental disease does autistic thinking play a greater role than in schizophrenia (dementia precox) among the basal symptoms, of which disturbances of associations are of special importance. In this weakness of association, affects exert a preponderant influence upon the course of thought. In the severer forms of dementia precox, "affective dementia" is the most striking symptom. While it is not probable that affectivity is ever entirely extinguished and even very active manifestations of it occur at times, especially in the earlier stages, these patients impress us in general by the indifference of their demeanor, one of the surest signs of the disease being defect in modulating the emotions, an "affective rigidity" (Bleuler). Such patients manifest no reaction in response to a usually affect-exciting occurrence, or react with a wrong manifestation, laugh at bad news, weep at good news, etc., "parathymia." Even a usually dull patient may, however, give an adequate reaction upon the exposure of a painful complex. What affective reactions occur are usually unnatural, exaggerated or theatrical, do not impress us, and these patients seldom respond to our emotions, hence the difficulty in feeling ourselves "en rapport" with schizophrenics.

In epilepsy affective reactions are pathologically strong. An existing affect lasts unusually long, and is with difficulty displaced by new impressions.

It is clear that affectivity contains many elements, that it varies immensely in different individuals, and must be considered in estimating both mental and physical symptoms. We have no means of measuring it.

However, any physician who will cultivate the habit of studying the mental characteristics of his patients while judiciously questioning them can learn to form a good practical estimate as to their relative affectivity.

The control of the emotions, through the banishment as far as possible of disturbing or exciting influences (by quiet and isolation), the conveyance of favorable suggestions, especially through a calm and hopeful attitude on the part of physician, nurse, and family, supplemented when necessary by the judicious use of drugs and other measures for the control of pain, excitement and insomnia, cannot but have a favorable effect upon our results, both medical and surgical.

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DISCUSSION

EDWARD A. FRANKLIN, M. D. (411 Bank of Italy Building, Los Angeles).—The importance of affectivity cannot be overlooked because of its practical bearing on the treatment of difficult patients. Peculiar affect states put obstacles in our path.

Affectivity is closely entwined with character and emotion, and the James-Lange theory of its physical basis is most to be depended upon.

While heredity and environment play a most important role in influencing affectivity of a given normal individual, we must not overlook such important objective factors as diurnal variations, changes of climate, changes in barometric pressure, etc., and in the pathological individual changes produced by disease.

Affectivity is undoubtedly influenced by a great many factors mentioned by Dr. Allen, but there is nevertheless

a certain constancy of affect states in individual instances, as illustrated by the faculty of memory.

Disordered relationship between normal nutritional elements of the blood system and its proper utilization by nerve tissues gives rise to dysfunction on the part of the nerve tissues, and may readily cause affect changes.

Affectivity may also be influenced to a great degree mechanically by interference with the circulation of the cerebrum and chemically by pathological nutriment of the central nervous system induced by metabolic, toxic, infective, parasitic, autotoxic, endocrinic, blood dyscrastic and other states which seriously deprive the neuron of proper nourishment.

The affective state is purely subjective and, while different stimuli show differences in the affective state, still these differences are peculiar to the individual, although they may vary slightly under normal and greatly under pathological conditions.

The affective state can be submerged by suggestion and hypnosis, and these measures are of undoubted importance in treating abnormal affective states. Strong affects are particularly noted in mania, delirium, fevers, and all congestive states of the viscera due to cardiac diseases or lowered sympathetic tone, while weak affects are more marked in dementia, stupor, melancholia, anemic states or anything which impoverishes the nutriment of the cerebrospinal system.

Interchangeable affective states from strong to weak or vice versa is a common occurrence in many diseases of the central nervous system.

AARON J. ROSANOFF, M. D. (Westlake Professional Building, Los Angeles)—I should like to emphasize what Dr. Allen has already touched upon, namely, the effect that strong emotions, especially depression and anxiety, have upon the physical condition of patients. I am thinking particularly of involuntional melancholia and allied conditions. In such cases, clinical experience fully bears out the experimental researches upon animals made by Cannon. Every psychiatrist is familiar with the almost invariable loss of appetite and progressive loss of weight which are to be attributed, I presume, to diminution and alterations of the secretions of the digestive organs and to diminution of gastric and intestinal motility. Unless the physician anticipates the threatened impairment of nutrition in the early stages of involuntional melancholia, and secures for the patient rest, isolation, and adequate feeding by means of milk or other easily digested food given in small quantities at frequent intervals, but furnishing in the aggregate a sufficient total caloric value, the duration of that disease will be needlessly prolonged and its mortality will continue to be high.

It seems probable that hyper-adrenalism has something to do with abnormally intense emotional manifestations, such as are seen in manic-depressive psychoses. At any rate, I have been often struck with the abnormally large size of adrenals in many of the cases which I have examined at autopsy, and occasionally I have seen hyper-nephromata either in the adrenals or in the kidneys. It may be that in cases of this kind some of the adrenal tissue should be excised, just as we excise thyroid tissue in cases of hyperthyroidism. So far as I know, this has never been attempted, and I doubt if our knowledge of the relationship between adrenal hypertrophy and excessive emotional manifestations is sufficient today to justify such surgical interference. I mention this solely for the purpose of interesting those who have opportunities of performing autopsies upon cases of manic-depressive psychoses and involuntional melancholia, so that eventually we may have such accumulation of evidence as would justify attempting radical procedure.

JOSEPHINE A. JACKSON, M. D. (1955 Morton Avenue, Pasadena, Calif.)—The topic timely, the subject matter exhaustively handled, the application practical—this is what we can always count on from Dr. Allen. "By no means the least important factor in the study of the patient is his mental makeup, particularly on its emotional side." Affectivity varies enormously in different individuals, and upon its degree and kind depend the power of adaptation of the individual to life.

Primitive man listened to his solar plexus, his feelings. Modern man is supposed to be governed by ideas, the cold product of the brain cortex. But the basal ganglia,

whose peripheral extension is the solar plexus, do by their proximity to the cerebrum give to every idea some warmth of feeling, some specific feeling tone.

His affectivity varies for the individual at different periods of his life, and in response to varying states of physical health. The chemistry of the body at the moment has its effect upon affectivity. No man commits murder on a full stomach; nor is a man held accountable for what he does in hot blood. Oliver Wendell Holmes asks pertinently whether the betting would be even if the prizefighter had indulged in a purgative on the eve of the fight.

"Is life worth living?" depends not on the liver alone, but on all the glands of internal secretion, for as a man feels so do his impulses flow. "Affectivity influences our thinking." An affectful idea holds the attention. The manic-depressive swings from pole to pole in his thinking as the chemistry of his body gives him the feeling of exaltation and again gives him the awful torture of depression.

A complex, what is it? "A group of conceptions bound together through having been built up around a strong affect and exerting a lasting influence on his psyche." "Guard well thy thoughts," for inevitably they build themselves into complexes.

The "affect-dynamic"—the point of departure for all studies in medical psychology. "The affect-accentuated complex is the mainspring of the symptoms—in the psycho-neuroses."

JOSEPH CATTON, M. D. (209 Post Street, San Francisco)—Dr. Allen's paper appeals to me because it demands consideration of the qualitative as well as the quantitative side of mental makeup. Contrast the quite due importance he gives the affective states with the often too great importance assigned to quantitative-intelligence-scaling. A mental rating has definite value, but tells but a small part of the story. One may get along with a mental defective rating if his affective side gives proper emotional attitude towards his surroundings and expresses itself in good moral makeup and personal appearance. Mental tests leave out affectivity entirely. Allen has shown that the emotional and the quality side cannot be neglected. He finds the influence of affects on mental content, but indicates that such influence is more marked lower in the scale—in primitives, children, and mentally abnormal. This last statement is only correct on the surface. I would stress the point that the *affective states are none the less active in the average civilized adult today* than in the savage, the child, or the insane. Intelligence is an overlay which has hidden, modified, guided, inhibited, and controlled affectivity in a measure; and in turn, intellectual activity has been modified, guided, controlled and made to serve affectivity. Increasing intelligence will not destroy affectivity; hence Allen's paper.

CLIFFORD W. MACK, M. D. (Livermore, Calif.)—*The great problem in medicine has always been and ever will be the conversion into useful agents of those theories that are proven experimentally.* Dr. Allen has given us a very clear resumé of the current thought and theory regarding affectivity, pointing out what can be given application in medicine. Psychopathology is like a laboratory searching for the truth about mental mechanisms. We as physicians wish to take the product from the laboratory and use it in our work-a-day contact with patients. How best to do that is the question we need answered. I think Allen's paper will help us along the road to more efficient application.

The study of the "human organism as a whole" is a most important principle to guide us in our work. In the survey of a sick person with either a physical or a mental illness, the various physiological functions are studied and their efficiency determined with such scientific exactness as we now possess. We are interested in the condition of the circulation, the renal function, the memory, and intelligence; so, in like manner, we should study the affectivity of our patient and the sum total of its influence upon the other physiological systems. The fact that thought itself is influenced and possibly conditioned by affectivity, that moods arise from associated memories in subconsciousness, that a complex may be projected into consciousness as a subjective symptom, all demand alert-

ness on the part of the physician in dealing with the complexity of disease.

Our knowledge of affectivity is of practical importance in diagnosis, treatment and prophylaxis. In gathering data for diagnosis we find that subjective symptoms may be the product of an emotional defect or their intensity may be increased by a particular state of feeling. Whether we believe in a physical origin of the emotions in the basal ganglia or the endocrine glands, we can all agree that the character of symptoms is influenced by the prevailing mood. A peripheral stimulus may only be sufficient to register discomfort, but in an emotional depression it becomes a pain, because the receptivity of the sensorium is increased. The neglect of this fact may lead us astray in diagnosis. In treatment our course of action is influenced in the same way. Despite the theories of emotion, we have all observed clinically the effect of the emotional reactions on the vital organs of the body. Dr. Allen mentions the bearing this has on the action of the brain, heart, unstriated muscles, secretory glands, etc. This is so positively demonstrated in the pathologically depressed patient that we must accept it as a fact. In every disease, then, we should consider the factor of emotions, retarding or accelerating reparative processes, nutrition, immunity production, and glandular function. Dr. Bush of the Arroyo Sanitarium tells me that the prognosis of pulmonary tuberculosis is greatly influenced by the patient's mood. Then looking at the problem from another angle, if the depression is primary, the secondary dysfunction of vital organs demands treatment. Psychic treatment alone is not sufficient, but should be supplemented by supportive therapeutic measures to prevent metabolic disorders, such as diet, drugs, and physiotherapy.

The prophylaxis of disease in general is intimately bound up with the affective mechanism of the mind. There is probably in the incipency of every organic disorder a period of functional weakness in the particular tissue that may be influenced by the emotional balance. This phase may not come under medical observation before symptoms are registered. It is noticeable in the neuroses and psychoses, which are purely functional in type. The somatic symptoms of the depressions, which quickly disappear with the oncoming elation, as well as in the opposite course of events, illustrate this point. The emotional overstrains acting over long periods of time are psychic toxins that ultimately may precipitate a neurosis or a disturbance of metabolism. The masterly control of the affective side of a patient's life then becomes a potent agent in the prevention of disease.

As our ability to apply these truths increases, our service to our patients will be augmented.

Cyrus C. Sturgis and James A. Greene, Boston (Archives of Internal Medicine, October 15), discussing the "Nutritional Changes in Exophthalmic Goiter: The Effect of Lugol's Solution," find that:

"A comparison of the body weight of these sixty-five patients with the standard weight tables shows that 80.2 per cent. averaged 18.2 per cent. below normal when they first appeared at the hospital. A study of the alteration in body weight following operation in thirty-six patients who had not been treated with Lugol's solution and therefore were operated on with an elevated metabolism, averaging +39, showed that all except one, in whom the weight was unchanged, lost an average of 5.2 per cent. of their preoperative body weight in an average of eleven days after the operation. The factors responsible for this loss of weight might be several, but it was concluded that the most important was the combination of the inability of the patient to consume normal quantities of food and the elevated metabolism, which may remain high for a period of ten days or longer following thyroidectomy. A second group of twenty-eight patients, who had been treated with Lugol's solution and in whom the metabolism was reduced to an average of +21 before the operation, was studied. In these patients, 18 per cent. had actually gained weight by the tenth post-operative day, and the loss of weight for the entire group averaged only 2 per cent. This loss is even less than the average decrease in body weight following operation in a group of twenty-five patients with colloid goiters and non-toxic adenomas.

THE CORRECTION OF FLEXION, ADDUCTION, AND INTERNAL ROTATION DEFORMITIES OF THE LOWER EXTREMITIES, RESULTING FROM CEREBRAL PALSY OF CHILDHOOD.

By RICHARD H. PYLES, M. D., Los Angeles

The treatment of adduction, flexion, and internal rotation deformities of the lower extremities, and without which nothing can be accomplished, is physiological rest.

The most efficient means of establishing physiological rest, the first and most important factor in the treatment of cerebral palsy, is the plaster of paris cast, which should be applied in all types of deformity as soon as the patient is seen. A decided relaxation is noticeable within twenty-four hours, and a general improvement will continue with the aid of proper systemic care up to the point actually produced by the brain lesion.

No operation yet devised has ever effected any reciprocal improvement in the affected muscles that have lost their cerebral control. Realizing that we have not a motor paralysis, but a destruction of the mechanism which governs voluntary expression, surgical interference is never indicated unless we have actual structural deformity to correct that cannot be overcome by manipulation under anesthesia.

Discussion by George Rothganger, Oakland; Harry J. Schott, Los Angeles; Frank A. Lowe, San Francisco.

CEREBRAL palsy of childhood, if our present knowledge of the primary pathology and nature's processes of repair are correct, is an incurable condition in which the brain has been retarded in its normal development by some injury which has either partially or totally destroyed its anatomical and physiological integrity. These destructive processes, striking as they have the main switchboard from which all thought and action is distributed, puts the entire system in a state of chaos. The diagnosis is easy because every patient presents many of the classic symptoms that have been described for the disease.

With the familiar picture in mind, I shall not dwell further on an academic discussion of why and how this all occurred, but will direct my remarks toward the best method of administering justice to the patients by assisting them to make the most out of what they have left. This can only be done in three ways: by (a) localizing the focus of disease or lesion in the brain and attempting, through surgical treatment, to open up some of the natural channels of repair; by (b) physiological rest and exercise, administered according to the vital requirements of the patient, and by (c) making an effort to prevent or correct the deformity which has occurred as a result of the primary lesion.

The first has not met with very much success, except in a few isolated cases that have been treated early and where the continuity of the nerve fiber and its adjoining cell have been embarrassed by pressure from without rather than by destruction of some part of the brain. Where extravasations of the blood have penetrated between the covering membranes of the brain, and in some cases where the injury to the motor, sensory and spinal centers in the cortex are not extensive, skillful surgical treatment soon after the injury has been responsible, rarely, for gratifying results. I believe that most neurological surgeons will agree with the statement that our natural biological laboratories of repair cannot be helped in their work very often where the lesion has been one of long duration from the

cause just mentioned and never where any part of the cerebrum, its trunk, or axis have undergone pathological changes, brought about by developmental alterations in utero or any form of cerebrospinal meningitis after birth. Bearing this in mind we turn instinctively to the second and third methods of helping these sufferers, which brings me up to the subject of this discussion.

The treatment of adduction, flexion and internal rotation deformities of the lower extremities—The most important factor of such treatment, and without which nothing can be accomplished, is physiological rest. When we realize how difficult this is to obtain in a patient with a normal brain and communicating system, we will at once realize the vastly increased difficulties that confront us in our effort to produce rest in patients with many of the association fibers that deal with psychical function and the motor centers of the cerebral cortex either partially or totally destroyed. We must realize that the end-result will be compatible only with our understanding of the abnormal condition and our ability to intelligently direct this knowledge to operate in the patient's behalf. The treatment, therefore, cannot differ materially in any of the classic types recognized as monoplegia, hemiplegia, paraplegia, and diaphragia, because they express to us merely degrees of brain impairment, which may be permanent and progressive, or may be temporary, but which can only be modified by appreciating the requirements for natural repair.

The effort that is constantly and systematically carried to effect normal function through the channels of a defective mechanism is responsible for an expression of disassociated and exaggerated movement that is productive of deformity and the formation of toxic elements which flood the system when the inhibition of the higher centers is impaired or lost. Consequently, we have not alone the actual deformity, which will always be permanent to deal with, but an apparent condition which is responsible for the thermic and vasomotor expressions produced by the fatigue toxins on a highly sensitive, sympathetic nervous system. The histories of my 155 cases studied during the last five years may not be entirely accurate. However, they are sufficiently so to signify a reasonably definite knowledge of the primary cause. Sixty-five per cent were due to cranial injury at the time of birth, or shortly after. Fifteen per cent were due to improper development of the fetus in utero or from some systemic derangement of the mother, 10 per cent to cerebrospinal meningitis during the first two years after birth, and 5 per cent unknown. There were nine cases of monoplegia involving the right leg, two cases involving the left leg, two cases involving the left arm, forty-six cases of hemiplegia of the left leg, twenty-nine cases of paraplegia involving the lower extremities, and twenty-six of diaphragia. The treatment of this group has been routine, irrespective of the intelligence or mental age of the patient.

The patients suffering from speech defects have been given special training under the supervision of Dr. W. G. Stivers, and the endocrine balance under the care of Dr. Clifford A. Wright.

In the department of neuropsychiatry, the mental

age and capacity of the patient is recorded before entering the department of orthopedic surgery. Until recently this department has not been consulted in determining the operability of the patient, but as experience teaches the impossibility of satisfactory post-operative training in the most extensive types of cerebral destruction, no patient at this time is recommended for surgery that cannot pass a grade of 50 per cent or better under the standard classification. Upon this basis about 75 per cent of the following patients have undergone some form of surgical operation to improve or correct their abnormalities, not including work done on the upper extremities.

Twenty-five cases of thigh flexion contraction were operated by Souter's method. An incision, beginning just above the anterior superior spine, is carried vertically downward for about three inches, the fascia is incised transversely down to the great trochanter, and the anterior and inferior superior spines are separated from the ilium, together with their muscle attachments. The thighs are then hyperextended and abducted. The procedure lessens somewhat the traction at this point. Where the thigh adductors are contracted they are tenotomized, a condition which is present in most cases of the paraplegic type that have not been treated, as well as in many cases of hemiplegia. Knee-flexion deformities, produced by the overacting hamstrings, were treated by the Robert Jones technique in fifty-five cases. The biceps is removed at the point of its insertion from the head of the fibula and dissected up to a point about the middle of the femur. From this point it is carried forward and downward over the fascia lata and inserted subperiosteally through a raised flap into the center of the patella. Thirty-five cases of this operation were performed by me and the end-results closely observed. Three cases of this deformity have been treated by the method described by Stoffel, which attempts to reduce the power of the overacting muscles by dividing the nerve of distribution to the muscle itself. I have not had sufficient experience with this operation to make a positive statement as to its relative merits, but in one case in which the Stoffel procedure was done on the right and the biceps was transplanted on the left, together with a tenotomy of the thigh adductors, I find that voluntary movement in the left leg is much better at this time.

The foot is generally in a position of talipes equino varus, unless it has been previously corrected, or the achilles tendon has been tenotomized at an earlier date. For the relief of this deformity, the E. P. H. tendon is transplanted into the head of the first metatarsal, the tibialis anticus to the outer border of the foot and, in some instances, the tibialis posticus into the insertion with the peroneus brevis; in others, a subastragaloid arthrodesis was done. Contracted plantar fascia has been treated by the method described by Steindler, in which all of the attachments are loosened from the os calcis. Arthrodesis operations on bone that have not completed their ossification are not very satisfactory.

The equinus in all of our cases has been treated by a tendoplasty to lengthen the achilles sufficiently to overcorrect this type of deformity, and never by a tenotomy, as the tibialis anticus and the pero-

nei will frequently take up the pull when the tension from the opposing extensors has been released, producing the opposite deformity, especially if the patient's weight is borne upon the foot without the support of a brace provided with a 90 degree down-stop at the ankle joint. All of these patients, without exception, have been placed in plaster of paris casts at the time of the operation. If the deformity is confined to the foot, either a full or short leg cast is applied, but in all cases involving the thigh flexors, adductors and internal rotators, a body spica is applied, with the legs abducted as far as possible. Suitable braces are fitted as soon as wounds are sufficiently healed to permit, which is generally from four to six weeks after operation. Physiotherapy, including suitable muscle exercises, is begun at this time in an effort to encourage voluntary control.

CONCLUSION

The most efficient means of establishing physiological rest, the first and most important factor in the treatment of cerebral palsy, is the plaster of paris cast, which should be applied in all types of deformity as soon as the patient is seen. A decided relaxation is noticeable within twenty-four hours, and a general improvement will continue with the aid of proper systemic care up to the point actually produced by the brain lesion.

No operation yet devised has ever effected any reciprocal improvement in the affected muscles that have lost their cerebral control. Realizing that we have not a motor paralysis but a destruction of the mechanism which governs voluntary expression, surgical interference is never indicated unless we have actual structural deformity to correct that cannot be overcome by manipulation under anesthesia.

Reducing the power of the contracted muscle or muscle group by surgical treatment will afford temporary relief by converting the strain to groups that have long been in subjection, but unless the defective extremity is held in a neutral position by some form of fixation dressing, a deformity opposite to that corrected will develop in a very short time.

Neither the accurate mental age nor the extent of the brain lesion can be determined until the general nutrition of the patient has been improved and the circulating toxins reduced to a minimum. The patient must be thoroughly relaxed and accustomed to his or her environment.

None of this series of cases under the most efficient care have made any change in their mental capacity ratio. Experience by personal contact and educational advantages that minimize the strain on the emotional centers improve the patient by developing a communicating system with the unimpaired part of the cerebrum. The result depends upon the scope of the decerebration.

1052 West Sixth Street.

DISCUSSION

GEORGE ROTHGANGER, M. D. (4501 San Pablo Avenue, Oakland, Calif.)—In this paper Dr. Pyles presents an enviable experience in spastic paralyses. He deserves much praise for his efforts to follow up the cases under the unfavorable conditions indicated.

I feel that the author would have added much to the value of the paper if he had expanded it for publication. The therapeutics is devoted almost entirely to the technical

side of certain surgical measures. The orthopedic treatment which preceded operation, except routine plaster of paris, has not been mentioned. It would be of value to know in more detail the reasons which led Pyles to select the several operative procedures that he did, and to know what his after-treatment was and for how long continued. One sentence would indicate that he believes all cases should be treated by open operation, except "where the vitality of the patient would not permit."

Operations directed to the relief of spasm have value only as they aid in the re-education of the muscles, and it is this re-education which is the real agent by which improvement is secured. Fixation with plaster of paris in the immediate post-operative period is of much value. But prior to determining the necessity for operation and in the very long, late post-operative period, well-constructed splints are preferable, for in them there is an opportunity for exercise of the weak antagonists of those affected with spasm, and one may thus avoid the atrophy of the complete fixation by gypsum.

HARRY J. SCHOTT, M. D. (1209 Brockman Building, Los Angeles)—In considering the treatment of spastic cases the surgeon must face a problem too often neglected and hurriedly passed over, as offering a hopeless prognosis or, at best, very poor results. One should not accept this type of case for treatment unless he be willing to devote to it prolonged and diligent care. The monetary expense to the patient is heavy, and one may be inclined to consider the end not justified by the means. The object of treatment, whether it be surgical or medical, is to establish voluntary control of muscles and co-ordination of movement. If the child is unable to walk we should attempt to get him on his feet, even if it be by means of braces and crutches. If he can be taught to help himself it is a benefit to him, as well as a heavy burden lifted from the family and attendants who must care for him.

I wish to emphasize the importance of the point made by Pyles of the great value of physiological rest, careful attention to physiotherapy (including muscle re-education), and to the correction of speech defects. Surgical treatment is indicated in certain selected cases, and the choice of methods depends, of course, upon the conditions present. It has for its object the restoration of muscle balance. Atrophic contractures, which do not relax under anesthesia, must be corrected by tenoplasties or tenotomies. The spastic contractures can be dealt with by either the muscle transplantations or by attacking the motor nerves by the Stoffel method. I believe that the Stoffel operation of neurectomy, in appropriate cases where the proper amount of nerve has been resected, and where the careful, diligent treatment is carried out, will give us better results than any of the other single procedures.

In our management of these patients our problem must be squarely met. Even though our results may not be brilliant in many, they will, in the vast majority, justify our efforts.

FRANK A. LOWE, M. D. (Flood Building, San Francisco)—My experience has been that considerable time has elapsed from the time of the occurrence of the palsy until the patient comes into the orthopedic surgeon's hands for care. The parents, relatives, or friends have consulted one or more physicians and met with discouragement. Frequently, the various cultists also have had their chance at curing them.

Due to the lapse of time, an operation for the relief or cure of the primary lesion is futile. The damaged area is irreparable, and any attempt on the part of the surgeon to eradicate it would only do further injury. In the upper extremity I find that braces or appliances hinder the progress toward recovery. So I depend upon physiotherapy, including active and passive massage and the training of certain groups of muscles to perform certain kinds of work. In the lower extremity it is more difficult to bring about a pleasing result on account of the definite function of supporting the body weight that must be performed. The adduction deformity of the lower extremity is corrected by a tenotomy at the knee by open incision and tendon elongation. The knee-flexion deformity, due to the overacting hamstrings, is corrected by a tendon lengthening of the various tendons involved by an open operation and sutures. The knee is put up in a plaster of paris dressing in an overcorrected position.

The talipes equinus deformity is corrected by subcuta-

neous tenotomies of the plantar fascia and tendo Achilles (Sayre), no sutures or stitches being used.

The subcutaneous tenotomy of the plantar fascia gives equal if not better results than the Stiendler operation and lessens chances for infection and scar formation, either one of the latter hazarding the chances for a good result. After the above tenoplasties and tenotomies are done and surgically dressed, the extremity is brought to an overcorrected position and put in plaster dressings, the parts being first padded with good absorbent cotton properly shaped and bandaged firmly but not tightly with a sleazy gauze bandage. Over this dressing is applied the plaster. Good absorbent cotton adds warmth and comfort to the parts, does not wrinkle, prevents pressure sores, and takes up moisture from the skin. The cast is fenestrated over the sight of the tenoplasties, allowing the latter to be dressed and the removal of stitches when open operation is done. The cast is split anteriorly its entire length to avoid constriction of the parts covered. Two weeks post-operative I find that these patients do better by removing the first dressings applied with the parts in overcorrection and followed by reapplying new casts, with the foot at a right angle to the leg and the knee slightly eased forward. The patient can walk in these dressings readily after a few days, with or without crutches, and enjoy life anew. At the end of four to six weeks the casts are removed and the foot, leg, and thigh modeled (depending upon the severity or extent of the involvement). From the model a proper brace can be made to support the extremity where needed. The casts are again applied and the child permitted to still further improve in the retaining dressings, until the appliance or brace is finished; then the casts are removed and the appliance fitted, and the child can get about with or without crutches.

I find that patients of a very nervous, irritable disposition and those who find it difficult to talk show a very marked improvement immediately after the tenotomies on the tendo Achilles (Sachs), thereby releasing the pull on the muscles and nerves.

Probably not more than once in five hundred cases is it necessary to do a tendon transplantation.

I believe that the Stoffel procedure is of much benefit in certain selected cases where there is overaction in the muscles of the thigh, but only in exaggerated cases.

Attempts at correction without tenotomy or tenoplasty are futile and cause great distress, without benefit, and in certain instances has produced a flaccid paralysis (E. H. Smith). Doctor Pyles is to be greatly commended on his most excellent presentation of the subject of cerebral palsies of childhood.

DOCTOR PYLES (closing).—In closing, I wish to express my appreciation to my colleagues, Drs. Schott, Rothganger, and Lowe for the interest they have shown in so freely discussing my paper. Answering Dr. Rothganger's question, my experience has been that no treatment in the more severe forms of spastic paralysis precedes the plaster of paris cast. It affords the most efficient method of controlling the patient for accurate diagnosis and logical treatment. He has suggested in his discussion that operations directed to the relief of spasm are of some value. Many of the operative procedures in this series of cases were selected with the view of relieving spastic clonus by neutralizing the pull of overacting muscles. This is an unnecessary procedure. The plaster of paris cast, applied under anesthesia, accomplishes this without surgery. I have carefully watched the treatment of many of these cases, comparing them weekly with similar pathological changes that were treated entirely by physiological rest with equally as good, if not better, end-results. In this respect I must differ emphatically with Dr. Lowe's statement that there is danger of producing a flaccid paralysis in making a correction under anesthesia without doing a tenotomy or tenoplasty. Trophic contractures should not be corrected by force, but one is surprised to find how many cases recommended for surgery can be corrected by gentle manipulation when completely relaxed. The judgment of the surgeon is of importance in this respect. A flaccid or ischemic paralysis can only be produced by excessive traction on the soft structures or pressure from the cast. As the mistake can be recognized by inspection very quickly, it can only be attributed to negligence. The general tendency has been, I think, to

do too much operating in these cases, which not only increases the monetary cost to the patient, but retards the after treatment and imposes unnecessary suffering.

The work now being done by Drs. Royal and Hunter may shed a different light on the treatment of spastic paralysis, but until we have established the permanent results to be received by sympathetic ramisection, conservatism should govern our recommendations in all cases.

METASTATIC TESTICULAR CARCINOMA INVOLVING THE ABDOMINAL MEDIASTINAL AND SUPRA-CLAVICULAR GLANDS TREATED BY X-RAY

REPORT OF A CASE WELL TWENTY MONTHS AFTER TREATMENT

By H. J. ULLMANN, M.D., *Santa Barbara Cottage Hospital, Santa Barbara, Calif*

DISCUSSION by W. E. Chamberlain, *San Francisco*; Lloyd Bryan, *San Francisco*; Frederick H. Rodenbaugh, *San Francisco*.

TERATOMA testis, while fairly uncommon, are so often malignant, and when malignant are so prone to form metastases, that we should keep any means by which their growth may be retarded, even when a complete cure is impossible, fresh in our minds. Surgery alone is insufficient except in the earliest stages, and is hopelessly inadequate when metastases have occurred. In nineteen post-operative recurrent cases seen at the Memorial Hospital, New York, orchidectomy had been performed upon eighteen. There were eight recurrences in the groin, along the spermatic cord; seven in the abdomen, along the spermatic lymphatics, and four in the lungs. In six cases more than one region had become involved.

Ewing divides teratoma testis into three main varieties:

1. Adult embryomas or teratomas.
2. Embryoid, teratoid, or mixed tumors.
3. Embryonal malignant tumors.

There are many intermediate forms connecting these types, and the same tumor may present several structures. The tumors arise, with rare exceptions, from sex cells situated in the rete testis, and the teratoma may develop either toward the testicle and epididymis, involving both in a large tumor mass, or, much more rarely, toward the epididymis, forming a typical tumor of this organ. The retroperitoneal nodes at the celiac axis are often involved through the lymph channels of the spermatic veins, and an epigastric tumor is often the first sign of recurrence. This is especially common with the highly malignant embryonal carcinomas. From this point there may be rapid progress upward, so that mediastinal and even cervical tumors may divert attention and become the largest tumors in the body. Invasion of the spermatic and iliac veins with continuous tumor growth extending as far as the heart has been observed both with chondrosarcoma and chorioma. Discontinuous metastasis by way of the veins is most frequent, and gives rise to tumors of lungs, liver, brain, kidney, and stomach.

Barringer and Dean report nineteen cases of post-operative recurrent teratomas treated by radium or

radium and surgery, with five living; 3, 12, 17, 18, and 28 months after treatment.

I have only one patient to report, but the results of treatment were so prompt and satisfactory that we considered them of sufficient interest to bring to your attention.

C. G. White, Age, 35. Was referred by Dr. Thorner of Santa Maria June 12, 1922. Two and a half years previously his right testicle had begun to enlarge and harden. A year later it was removed. The pathologists report was teratoma. Recovery from operation was uneventful, and he felt well for fifteen months, when he began to have pain alternately in the back and groins. He reported to his surgeon three months later, eighteen months after operation, who found abdominal and cervical masses, and referred him to me for treatment. The patient stated that he had noticed the cervical tumor for the first time about ten days ago. He had had abdominal cramps off and on for three or four weeks which were growing worse, and he felt that he was rapidly losing strength. The only incident of interest in the family history was that his mother died of a breast tumor at thirty-eight. Physical examination showed an exceptionally well developed and nourished man. He looked sick and presented evidence of rapid loss of strength. There was a rounded, smooth tumor in the left lower cervical region 3.5 cm. in diameter. Roentgenograms of the lungs showed a moderate, smooth enlargement of the mediastinal glands, and there was a hard, reniform, slightly nodular mass in the right abdomen, measuring not less than 12x20 cm. The right testicle was absent, the left appeared normal. There were no palpable axillary, epitrochlear or inguinal glands. Routine blood and urine examinations were essentially negative.

Treatment was started immediately. My 100 per cent dose is the amount of radiation delivered at 50 cm. target distance in ninety minutes, with 1 mm. of Cu plus 1 mm. A1 as filter, 200 KVP and 5 milamp. An attempt was made to put at least 90 per cent of this dose into all tumor areas. It required six and one-half hours to do this, and the treatment was completed in eight days. He returned on September 6 for a second series. At this time, eleven weeks since the completion of the first treatment, the cervical mass was about 2 cm. in diameter, and the abdominal mass was just palpable. Seventy-two per cent of the first dose was administered in four days. Ten weeks later no evidence of any tumor mass could be found. Our records of February 17, 1923, state that on that date "No evidence of tumor found at any point. Has been and is working full time—clinical cure."

He last reported April 23, 1924, and the same negative findings were obtained. Roentgenograms of the lungs have been repeatedly negative. The slight mediastinal increase has disappeared. He is, therefore, well of his tumor twenty-two months after treatment was first instituted.

No report has been obtained relative to the type of teratoma originally found, but it is fair to assume that it was of the highly malignant embryonal type, because of its rapid and extensive metastasis and its prompt response to roentgenotherapy.

Third Avenue and Bath Street.

DISCUSSION

W. EDWARD CHAMBERLAIN, M.D. (Stanford University Hospital, San Francisco)—A most valuable part of Dr. Ullmann's paper is his description of his technic in this successfully treated case of metastatic testicular carcinoma. From our measurements of Ullmann's x-ray output we have calculated that the 100 per cent dose which he mentions amounts to 1300 E. (The E unit is that amount of x-ray which will produce 2,100,000,000 ions in 1 cc. of air, enabling it to conduct one electrostatic unit of electricity.)

My patient, Mr. A. J. G., was referred to me on December 18, 1923, many months after removal of the primary growth—a carcinoma of the testicle. When referred he had developed huge masses throughout the abdomen and a marked degree of cachexia. I considered him unsuited to heavy dosage, but gave him 850 E over the

back of the abdomen, repeated the next day over the front. These doses were delivered with 200 KV (crest) 70 cm. A. S. D., 35 cm. diameter areas, filters $\frac{3}{4}$ mm. cu. plus 1 mm. aluminum. On January 22, 1924, the large tumor on the left side of the abdomen had disappeared, and shortly after this all traces of tumor masses were gone. On January 22 and 23, I gave him 565 E posteriorly and the same amount anteriorly.

On March 17, the patient reported with masses in the left neck, the right mamma, and the liver. Fluoroscopically, there was no enlargement of the mediastinum. The patient was quite weak, and I was again afraid to use large doses. I determined upon relatively small doses over a relatively wide area, and treated him from neck to pubis at weekly intervals, delivering 150 E posteriorly and anteriorly each week.

For a time there was a very rapid improvement, with all masses regressing until none could be made out except that the liver never went back to its normal size.

About May 15 ascites began to develop, and the patient rapidly went downhill again, although a month previously he had been back at his work and in much better shape. The patient died on June 9, 1924. The most striking feature of this case was the disappearance of the widespread metastatic masses under the 150 E dosage, about 12 per cent of Ullmann's 100 per cent dose.

An exactly similar case which also developed distant metastases has been treated by me at the San Francisco Hospital, with the same marvelous response to radiotherapy. Some six months after institution of treatment, this patient was in excellent general health and all masses had practically disappeared, although the dosage had been only a fraction of the maximum.

The striking result in Ullmann's patient leads me to believe that when there are no contra-indications the first high voltage x-ray treatment should be of maximal intensity. Unfortunately, many of these patients do not reach the x-ray laboratory until so weakened and cachectic as to lead us to fear the results of such large doses. I plan to imitate Ullmann's technic when the opportunity presents itself, and feel sure that earlier administration of the large doses will result in the longest possible period of arrest of the disease.

LLOYD BRYAN, M.D. (135 Stockton Street, San Francisco)—This report of Dr. Ullmann's emphasizes what may frequently be done with high voltage x-ray therapy in hopelessly inoperable cases. Tumors of this sort are many times particularly susceptible to the radiation.

FREDERICK H. RODENBAUGH, M.D. (516 Sutter Street, San Francisco)—Ullmann's results are similar to those obtained in two of my patients, except that I have used rather small dosage—about 25 per cent of the amount used by Ullmann.

It is my impression that embryonic tumors of this nature, when susceptible to radiation, do not require large doses, but a small fraction of an erythema dose is necessary. The ultimate result is usually bad; the patient succumbs to cachexia, or metastasis, which cannot be controlled. However, the gratifying palliative result encourages the study of these interesting neoplasms.

I hope that Dr. Ullmann will report the progress of this case at the next meeting.

DR. ULLMANN (closing)—The reason for giving a heavy initial radiation to this patient was to obtain, so far as possible, what we call the optimum dose. This dose is one that will produce the greatest injury to the malignant cells and at the same time the least injury to the patient. The patient in this instance was in excellent physical condition and, therefore, could stand a dosage larger than a cachectic individual, i. e., a dose large enough to be distinctly injurious to the malignancy. It is reasonable to assume that a large factor in obtaining results in this case was this ability to withstand a large dose.

Chamberlain's excellent results, I believe, were due to good judgment in his attempt to obtain what, to his patient, was the optimum dose. We have a happy result from radiation treatment when we hit upon this optimum dose, which varies with every case. Where our results are poor we probably either fail to properly estimate the dose, or it is unattainable because of unknown factors present.

EARLY RACHITIC CHANGES IN THE FEMUR AND TIBIA

By HALBERT W. CHAPPEL, M. D., Los Angeles

Although the etiology of rickets is still unknown, and its early symptoms are frequently very obscure, an early diagnosis may be definitely made by means of the roentgen rays, and treatment started before the development of structural deformities.

Full discussion by William Palmer Lucas, San Francisco; Rolla G. Karshner, Los Angeles; William Sidney Bowers, Los Angeles; H. H. Markel, San Francisco.

THE etiology of rickets—a disease which may exist without symptoms, but which early affects the structure of the bones—is not known, and it is, therefore, very difficult to recognize and study in its early stages. Of the various theories advanced, that of defective feeding seems to offer a cause in the greater number of cases, the diet being so unbalanced that it really seems antagonistic to the deposition of calcium in the growing bone matrix.

After a most thorough review of the literature, one is unable to select a diet that will prevent rickets in every person. A low-grade infection, lack of sunshine and fresh air, insufficient amount of exercise, prenatal influences, or some constitutional disorder, apparently causes rachitic changes in cases where the diet has been carefully selected. On the other hand, rickets is frequently found in a seemingly well child of healthy parents where the diet has always been well-balanced, fresh air and sunshine have been abundant, and there was a normal amount of exercise each day. Rickety children are often fat, rosy, and apparently well nourished.

In normal developing bone, the areas of ossification, and the calcification, proliferation and arrangement of the cartilage cells are definitely marked off from each other. This orderly arrangement is lost in rickety bone, as the lime salts are deficient in some parts of the cartilaginous matrix, and irregularly deposited in others. There is also a marked increase of the proliferating cartilage cell zone, which, together with an overproduction of the osteoblastic elements, results in enlargement of the bony structure, but of an imperfect character because of the deficiency of the lime salts.

The growing line at the epiphyseal junction is broader than normal, the width also being considerably increased and easily felt when the ossifying cartilages are subcutaneous. There is excessive proliferation of the osteoblastic layer of the periosteum, which increases the circumference of the bone. Under proper treatment the rachitic changes give way to a more normal process of ossification. When discovered and treated early, the rickety bone frequently shows but slight changes from normal bone.

The large epiphyses, bent limbs, large square head, Harrison's groove, rickety rosary, "pot-belly," delay in closure of the anterior fontanelle, profuse head-sweating, delayed dentition, and marked muscular weakness, give a clinical picture so striking that rickets can hardly be mistaken. However, in mild cases it is difficult to determine what constitutes evidence of rickets.

Occasionally there are no symptoms except bow-legs (genu-varum) or knock-knees (genu-valgum), which mother felt sure did not exist a few weeks

ago. More frequently, vague symptoms with gradual onset, and general distribution, do not suggest rickets until there have been sufficient changes in the bones to cause the characteristic deformities. Abnormal lateral mobility and hyperextension of the knee joint, resulting from relaxation of the ligaments and from weakened condition of the muscles, contribute largely to bow-legs or knock-knees. The latter are also aggravated by the everted feet, so frequently seen in these cases.

Occasionally there has been no decrease in activity. More often there has been for some time vague symptoms which did not yield to treatment which, however, was not for rickets. An x-ray of the lower extremities apparently would have been the only definite way of determining the cause of the symptoms. It is this type of rickets so frequently overlooked, even by excellent diagnosticians, and responding quickly and rather completely to treatment, which I wish to emphasize in this paper.

An x-ray on one plate, from just below the crests of the ilia to and including the feet, is necessary, not only to determine the changes in the femur and tibia, but to give an accurate record of the deformity. In these very early cases the greater changes are at the lower end of the femur, and upper end of the tibia. The whole joint has a hazy appearance, the shafts near the epiphyseal lines are clearer and more transparent than normal. There is also a noticeable thickening at these points. The epiphyseal lines are considerably broader and not nearly so clearly defined as normally. Usually there is an increase in the calcified material in the epiphyseal region. The lower epiphysis of the tibia and fibula show changes similar to those just described, sometimes more marked, but frequently not nearly so noticeable.

Operative interference is not indicated in any type of rickets where the bones are still soft. Nor is it necessary to subject the patient to the prolonged use of braces. During the acute stage there is hyperemia of the entire joint, which should be protected for several weeks by complete rest.

The type of rickets which has just been described responds quickly to the following treatment. Very slight changes, if any, are made in the diet, but cod-liver oil is given for several weeks. Exposure to sunshine in the open is a routine.

Corrective treatment is begun immediately. By means of thick chamois-covered felt pads, placed between the internal condyles, in knock-knees, the internal malleoli are gradually brought together while the knees are held firmly to the table. This overcorrection is maintained about five minutes, then light plaster of paris casts are applied as rapidly as possible from the groin to and including the foot.

In this way correction is obtained with the first casts, without using any pressure during their application. No weight-bearing for four weeks. Then another stretching gives full overcorrection which is maintained for four weeks by walking-casts. The muscle balance is restored by high shoes with one-eighth of an inch float on the inner side of the heels and soles, and frequent stretching at the knees. In from two to four months after removal of the casts

correction is not only complete, but the x-ray gives evidence of normal or greater density of the bones.

A simple device, fastened to the table, keeps the knees fully extended during the stretching. This is made of two pieces of aluminum, twelve inches long, five inches wide, padded with felt and covered with chamois. The lower one is fastened to the table by two bolts with thumb screws, while the upper one is held firmly against the knees by two pieces of webbing passing through each end of the pads and buckling on top.

By gradually increasing the pads between the internal condyles, marked overcorrection may be obtained and held ten or fifteen minutes without discomfort to the patient, especially if the outer part of the ankles is protected by felt pads. As the appliance which holds the knees firmly to the table allows about 5 degrees of flexion, there is no unnecessary strain to the posterior part of the knee joint during the stretching.

Since the process is much more difficult in cases of bow-legs, the following appliance has been very helpful. Two small semi-circular pieces of metal, to one side of which is riveted a strap, then covered with felt, and to the other a narrow piece of metal four inches long with several screw holes, are fastened as closely together as possible. On the other end of each strap is a sliding felt pad, to complete the circumference of the leg. This appliance, which may be gradually widened to seven inches, is strapped on just above the ankles. The feet are held markedly everted by an assistant while the knees are slowly brought to a position of overcorrection and held there several minutes.

The procedure with casts is the same as with knock-knees, but the float on the shoes is on the outer side of the heels and soles. The feet must be carefully watched and the floats removed when the first sign of weakness appears.

Although the etiology of rickets is still unknown, and its early symptoms are frequently very obscure, an early diagnosis may be definitely made by means of the roentgen rays and treatment started before the development of structural deformities.

1136 West Sixth Street.

DISCUSSION

[EDITORIAL NOTE—Ordinarily, discussions of papers are limited to five hundred words. However, an exception is made in the case of Doctor Lucas' discussion, because of the tremendous importance of the questions raised by Doctor Chappel, and because of the additional opinion brought to bear upon the question as the result of original investigation.]

WILLIAM PALMER LUCAS, M. D. (University of California Medical School, San Francisco) — Doctor Chappel's discussion of the pathology of the bone in rickets is very well expressed. I am not in a position to discuss his corrective treatment and orthopedic stand, but concerning the etiology of the disease, although the cause is still obscure, I do not think we need to be as pessimistic as one would be led to believe from Doctor Chappel's introductory paragraph. Since Mellanby published his experimental work in 1915 on puppies, many very valuable contributions to our knowledge of rickets have been brought forward, and we are in possession at the present time of means of successfully preventing and treating early rickets before deformities have occurred. We know that rickets is controlled by two masters—one dietetic, and the other environmental. In cod-liver oil, we have a specific both for the prevention and cure of rickets. The origin

of its use is obscure, but we know that its anti-rachitic properties were appreciated early in the eighteenth century. Mellanby placed the use of cod-liver oil on an experimental and proven basis. The work in this country, particularly by Parks, has shown conclusively that sunlight or the artificial mercury vapor quartz rays equally prevent and cure rickets. When one discusses, however, the fundamental question as to what prevents the deposition of lime salt in the bones, we have not arrived at a final answer. On the other hand, we have various studies on salt and inorganic salt metabolism in relation to bony development, and have accumulated a great deal of evidence.

During the past three years, Doctor Martha Jones of the University of California Medical School has been carrying on a series of experiments with puppies which has conclusively shown that the diet of the mother during pregnancy has a very marked effect on the tendency of the puppies to develop rickets. In our experience, brood bitches which are fed on a mixed food containing a liberal amount of inorganic salts give birth to normal puppies, while the same animals fed on a diet low in calcium, produce litters of puppies which have a marked rachitic tendency. These puppies frequently develop severe rickets on what appears to be a well-constituted diet. It is a well-known fact that infants, as well as animals, vary tremendously in their susceptibility to rickets. Some infants will develop rickets to a marked degree on the same diet and under identical conditions on which others develop normally. The same is true of experimental puppies. In such cases the fault unquestionably lies in the individual and not in the diet or environment. Metabolic studies conducted in our laboratory, as well as in those reported by other investigators, showed that the distribution of calcium and phosphorus between the urine and feces in a rachitic child or puppy is different from that which occurs in the normal individual—a much larger proportion of both elements being excreted in the feces of the former than in those of the latter. In rickets the alkalinity of the feces and urine is increased with a marked decrease in the retention of calcium salts. Experimentally, this condition, which ultimately results in rickets, can be produced in a puppy on a diet which appears to be adequate, in respect to protein, fat, carbohydrates, vitamins, and inorganic salts, but contains an alkaline salt mixture, and may be cured with no change in diet or environment other than the addition of sufficient HCl to neutralize the excess of alkali. Here, again, individuals of the same litter vary tremendously in their reaction to acids and alkalis. In certain individuals who develop rickets quickly and to a marked degree, very large doses of acid are required to reduce the H ion concentration of urine and feces to neutrality. On the other hand, other individuals can tolerate relatively large quantities of alkali and not excrete alkaline urine and feces. In rickets there appears to be a very nice adjustment between the acids and bases and an individual's ability to store bone-forming elements. If rickets can result from too high a degree of alkalinity in the intestinal tract, it is conceivable that this condition may be the result of an insufficiency of HCl in the gastric secretion. Those infants who have relatively little HCl may develop normally when breast-fed, but if the diet is changed to foods having a higher buffer content and potential alkalinity, such as cow's milk, the amount of acid present may be insufficient for normal mineral metabolism. Faber has shown that between 50 and 60 cc. of N/10 HCl are required to reduce the H ion concentration of a given quantity of cow's milk to a pH of 5.0, while 15 to 20 cc. of N/10 acid are sufficient to reduce the pH of a like quantity of human milk to the same value. If rickets is due to faulty absorption of the calcium salts in the intestines as the result of too high a degree of alkalinity, we can explain why artificially fed infants are more prone to the disease than those who are breast-fed. Individual difference in HCl secretion may also explain why one of a pair of breast-fed twins is rachitic and the other not.

While diet and hygiene are important factors in the production and cure of rickets, I am of the opinion that the diet of the mother during pregnancy and lactation is equally important in determining the susceptibility of an individual. Statistics show that the average American dietary is low in minerals, especially calcium. This is

particularly true of the poorer classes in large cities who cannot afford sufficient quantities of the mineral-rich foods, such as fresh fruit, green vegetables, and milk. In the light of our experimental observations which agree well with clinical experience, we dare to believe that when the dietaries of expectant mothers are planned to include liberal quantities of inorganic constituents in their proper proportions, a long step will have been taken toward the eradication of this disease which has baffled the medical profession for so many generations. If this theory is proven true, rickets of the future will be the responsibility of the obstetrician rather than the pediatrician.

ROLLA G. KARSHNER, M. D. (1136 West Sixth Street, Los Angeles)—As Doctor Chappel has justly stated, the x-ray is distinctly valuable in the recognition of rickets. However, a number of conditions must be excluded. It occurs most commonly at an age when other bone dysmorphies, likewise manifesting multiple and symmetrical lesions, make their appearance. The differentiation is made by directing attention to the epiphyseal line. In rickets this is profoundly disturbed. It becomes softened and spreads, often with a roughly saw-tooth appearance. The end of the diaphysis resembles an inverted saucer, most marked in those joints where the mechanical forces are in line with the shafts. The epiphysis itself is not disturbed except possibly as a result of generalized atrophy. Often the lime salts are slightly condensed at the epiphyseal line. There is swelling of the periarticular soft tissues. The above changes cause limitation of motion and a general atrophy of the bones with softening, bending, and multiple fractures often resulting from non-use and impaired nutrition. Rarely there is periostitis in the acute stage. The chest will show the rosary even when it is not demonstrable clinically, and in severe cases one may see atelectatic strips in the lung beneath the costochondral junctions. With proper treatment, calcium is deposited in the periosteum and the cartilagenous epiphyses, in the latter case not as a direct continuation of the bone, but somewhat separated so that the picture may be confused with scurvy. In healed cases one often notes thickening of the cortex; for example, notably along the inner border of the shaft of the tibia and transverse lines of density in the ends of the shafts. The epiphyses remain expanded.

In chondrodystrophy the bones are shortened, dense; fractures are rare. The ridges for muscular attachments are enlarged. The joints are normal. The hands, feet, and changes in the base of the skull are unique. The shafts of the bones expand abruptly at the epiphyses, and ossification is deficient, irregular, often with localized overgrowths. The changes in cretinism are somewhat similar to those of chondrodystrophy.

Hereditary deforming chondrodysplasia (multiple oxostoses) often involves the epiphyses much as chondrodystrophy, the differential point being the formation of tumors of various density arising from the cortex, most frequently juxtaepiphyseal, and pointing away from the epiphysis. Osteopsathyrosis presents markedly diminished bone density, deformities, fractures, but no changes in the joints or epiphyses. In congenital lues in infants the destruction is in the epiphyses, principally, however, sharply circumscribed on the diaphyseal side at the junction of the periosteum and epiphyseal cartilage. There is usually periostitis, but no saucer-like expansion of the epiphyses. Scurvy presents intact joints and epiphyses with the destructive Trummer zone simulating a second epiphyseal line, and there are frequently subperiosteal hemorrhages. Nutritional disturbances and arthritis (Still's disease) do not involve the epiphyseal lines.

WILLIAM SIDNEY BOWERS, M.D. (1136 West Sixth Street, Los Angeles)—In recent years preventive medicine, particularly in pediatrics, is rapidly advancing. I am very glad to see Doctor Chappel stress the point of an early diagnosis and treatment in rickets before marked deformity has occurred. In the more advanced cases, the parents frequently diagnose this disease, but then such marked deformity has occurred that, although proper curative and orthopedic treatment is instituted, it is almost impossible to overcome the deformity.

I do not agree that we have not advanced in our knowledge of the etiology of rickets, for in the past five

years we have acquired considerable valuable data concerning this disease. The outstanding factors in the etiology are both dietetic and environmental. The determining factors in the diet are not entirely settled, but depend upon certain salt combinations—hydrogen ion concentration, and the presence or absence of an unknown constituent closely associated with fat soluble A vitamin. The factor of environment involved is the presence or absence of radiant energy.

The seemingly well child mentioned as developing rickets on a well-balanced diet, with sunshine, fresh air, and exercise, would not have developed it, I feel sure, had cod-liver oil, or even radiant energy in some form, been properly administered, or possibly egg-yolk. Now, while this preventive treatment need not be instituted with all infants, certainly the pediatricists and others practicing with infants should recognize certain conditions which predispose to rickets, namely, prematurity, pigmented skin, and extra-rapid growth. In these cases proper preventive treatment against rickets should be instituted.

Regarding the early recognition of rickets, I believe it can be diagnosed clinically in the majority of cases as early, and in some cases earlier, than with the roentgenogram. In other words, a negative roentgenogram does not rule out early rickets, and while the roentgenogram is a valuable aid in the diagnosis in many cases, it is not a necessity in all cases. The blood inorganic phosphate findings are quite characteristic in rickets, but not pathognomonic. Many recent investigators have emphasized the difficulty of establishing a diagnosis of rickets in the early stages from the clinical findings, but certainly if the findings warrant a probable diagnosis of rickets, it is better in this disease to err on the safe side and treat the case for rickets, for this treatment in itself is harmless.

The early signs of rickets are cranio-tabes, differentiating this from congenital ossification; rachitic rosary, ruling out scorbutic rosary, and cranial bossing, ruling out luetic bossing. I believe such findings as flabby musculature, wide fontanel with surrounding softening, and delayed dentition, when occurring in conjunction with some of the above mentioned signs, are of aid in the diagnosis, but existing alone are of little value. Enlarged epiphyses, Harrison's groove, bent limbs, "pot-belly," delayed closing of fontanel, occur relatively late in the disease. Head-sweating, anemia, and palpable spleen are not dependable findings.

The orthopedic treatment as outlined by Chappel would seem conservative, and I would expect it to bring results.

H. H. MARKEL, M.D. (380 Post Street, San Francisco)—Doctor Chappel's paper is of peculiar interest to me, for I have recently had a family of three children under my care for knock-knee. The first child, a boy of 8, was so far advanced that an osteotomy of the femora was necessary. The second, a girl, needed casts only, which were later wedged on the outer side, and then wore braces. The youngest, a girl of 3, is fat and rosy and apparently well, but if she continues to be fed as the other children were she will develop a knock-knee. But I have given her mother a shotgun prescription of cod-liver oil, fresh meat and vegetables, and *sunshine*, and I expect to prevent her deformity from appearing. Another thing I have noticed is that all children who come to me for bow-legs or *knock-knees*, have *not had fresh meat to eat*. Even with a full set of teeth, the mothers all seem to fear giving them meat—why I cannot tell, except possibly a fear of choking. Recently, too, I have had consultations with Dr. Martha Jones regarding these early rachitic cases. She has assured me that her experiments have shown that deficiency of calcium metabolism in the mother in the late stages of pregnancy is responsible for rachitic changes in the young. This is manifest in the well-known saying, "For every child a tooth." I am sure that there are many more cases of rickets in California than we have formerly considered, even though we have an abundance of sunshine and fresh fruits during nearly the whole year—but we probably do not make the best possible use of them.

Physician (to rich patient)—You're all run down. I suggest that you lay off golf for a while and get a good rest at your office.—Life.

SOME IMPORTANT POINTS IN THE RAPID HEALING, COMPLETE RESTITUTION OF FUNCTION, AND LOW MORTALITY IN SUPRAPUBIC PROSTATECTOMY CASES.

By HERBERT A. ROSENKRANZ, M. D., *Los Angeles*
(From the Department of Urology, Los Angeles
General Hospital)

Since urologists have, during the past ten years, built up a system of procedure which has made possible the restoration of health and function to the patient and the adding of years of comfort to his life, so that he need no longer be subjected to a life of suffering coupled with impaired physical and mental activity and in many cases early death, I hold it to be our duty to correct any mistaken impression that may exist among some of the laity, that prostatectomy is a dangerous operation and leaves the patient impotent, a dribbler, or with some unhappy sequelae; because the simple, shockless procedure of suprapubic prostatectomy may be unhesitatingly recommended as a cure for this condition.

DISCUSSION by Louis Clive Jacobs, *San Francisco*; Robert V. Day, *Los Angeles*; Jay J. Crane, *Los Angeles*.

PREPARATORY TREATMENT—In one of my first papers on prostatectomy, read about nine years ago, I stated that the most important part of the prostatectomy was the preparation, and my experience since that time has confirmed that belief.

PROGNOSIS—A markedly emaciated patient is a poor risk, regardless of otherwise brilliant findings. I also draw the line on imbeciles, the bedridden and advanced tabetics. I believe that in the past we have been too narrow in our determination of fit surgical risks. We have been inclined to place our whole trust in the kidney function and blood chemistry findings, with a tendency to ignore a weakened myocardium, general debility, malaise, blood pressure, infectious and other complications, such as fistula in ano, carbuncle, bed sores, obesity with broken heart compensation and pyelonephritis. Such conditions must be relieved before operation. I do not operate upon a patient until or unless he is feeling good. I have not found high blood pressure up to 250 systolic to be a contra-indication to operation. A patient with a very low pressure should be carefully checked up. His vitality is low.

NURSING—The selection of competent, trustworthy nurses, is all important, not merely from the standpoint of morbidity, but from that of mortality as well. The urologist should provide himself with a sufficiently large list of reliable nurses of good character, or all of his good work may be for naught.

DIAGNOSIS—The more common mistaken diagnoses that have been referred to me for prostatectomy have been stricture, contracture of the bladder neck, acute and chronic prostatitis, tuberculosis of the bladder, bladder calculus, diverticulitis. Combination of prostatic tumor and stricture or prostatitis I have found to be not so rare, and unless these coincident conditions are first relieved the prostatectomy will either not cure the patient, or convalescence will be more or less indefinitely postponed.

CONSULTATION—I have found it a most excellent arrangement to have associated from the beginning of the treatment an internist. His counsel in a number of cases has proved invaluable.

GASTRO-INTESTINAL—Hygiene is of prime im-

portance. I have had several cases of fecal impaction, resulting from the extreme protrusion of the tumor into the rectum. In these cases the enema fluid will frequently not return, but must be syphoned away. To relieve these cases I employ oil enemas, flaxseed tea, castor oil, cascara, and other laxatives and cathartics. Unless the bowel has been thoroughly cleansed and regulated, a stormy convalescence is the rule. A high saline enema is frequently given daily. Cathartics are administered before breakfast, so that the patient's sleep will not be troubled. Charcoal tablets are administered thrice daily. Abdominal massage, walking, and easy physical exercises are prescribed.

HAEMOSTATIC—(1) Calcium lactate gr. XX t. i. d. for three days preceding the prostatectomy.

(2) Two cups of fruit gelatin daily for three days prior to operation.

(3) Fibrogen—one or two ampoules subcutaneously the night before operation. Two ampoules one hour before operation. I also employ fibrogen to adjust coagulation time of the blood when necessary.

(4) Spinal anesthesia. It lowers blood pressure and delays muscular contraction of the traumatized tissues.

CARDIAC—Endocarditis, provided compensation can be established, is by no means a contra-indication to operation. A myocardial weakness, however, that does not readily respond to digitalization is a treacherous condition. It is better for such a patient to lead a catheter life, or at any rate to dispense with operation. *Digitalization*: I utilize digalen one ampoule intravenously t. i. d., or digifoline one ampoule subcutaneously t. i. d.

TONICS—Aside from the old standard, elixir of iron, quinine and strychnine, I have achieved good results with cod-liver oil preparations in building up the patient's health, and I believe also in specifically increasing his resistance to infection and other complications that the asthenic may be exposed to. Containing as it does 400 times as many vitamins as any other preparation, is it not probable that we have too often failed to bear in mind the efficacy of this drug? Calcium chloride is a cell tonic and eliminant, and I frequently administer three grains intravenously once daily.

GENITO-URINARY PREPARATION—A bladder that contains more than 200 cc. of residual urine should be emptied fractionally, and an indwelling catheter inserted. Daily instillations of argyrol or irrigations of silver nitrate, mercurochrome, or boric acid are administered, according to the degree of infection and the tolerance of the patient, the object being to reduce congestion, infection, and sensitiveness of the bladder, and particularly of the prostate and trigonal region, in order to lessen the kidney reflex that occurs at the time of prostatectomy. *Fluids* are only moderately increased in quantity, since I have found it necessary to safeguard the myocardium as well as the kidneys. *Cystoscopy*: This procedure should be preceded by administration of acid sodium phosphate and hexamethylenamin for several days, and these drugs should not be left out of consideration in the preparatory and after treatment of those patients predisposed to pyelonephritis. If practicable,

an indwelling catheter is utilized for several days preceding suprapubic cystotomy.

ANESTHETIC—I prefer gas oxygen for the first stage, and spinal for the second stage. Some patients demand to be put to sleep for the second stage, and to these I administer gas oxygen or, if the prostate is very deeply situated, ether. I object to local anesthesia because it tears tissues, thereby reducing their resistance to infection. I have never seen any untoward result due to gas-oxygen anesthesia. Parascral anesthesia is not adequate for suprapubic work. I have found a spinal anesthetic of from one and three-quarter to two and one-half grains of novocain, ideal in all cases except those with low blood pressure. To the latter named I give a general anesthetic. Spinal anesthesia justly deserves the high place that it holds in this operation, because it prevents hemorrhage by lowering blood pressure and by allowing the prostatic cavity and the muscles surrounding it to remain at rest for some hours following the operation. By this means it also minimizes what little pain might otherwise ensue; and also blocks any immediate renal reflex, and I believe minimizes shock by blocking many other reflexes. The patient partakes of eggnog every three hours following the operation, instead of suffering from nausea and vomiting, as may be the case after a general anesthetic. I once asked Mrs. Greer, head nurse in the urological department of the Los Angeles County Hospital, to what she attributed the excellent results that we were having with our prostatectomy cases. Her instant reply was: "Doctor, I feed my patients. I give them plenty of eggnog on the day of operation and thereafter." Some time ago I walked through the urological ward of our General Hospital and noticed a patient upon whom I had performed a prostatectomy three hours previously under spinal anesthesia. He was sitting up in bed, with a writing board on his lap and a pencil cocked back of his ear. He was folding a letter which he had just written, setting forth the happy outcome of his operation.

ONE-STAGE VERSUS TWO-STAGE—My results with the one-stage have been as good as with the two-stage in selected cases, and when I have taken care of the cases personally. The absolute indications for a two-stage operation I hold to be:

- (1) Bladder or kidney calculus.
- (2) Acute vesical retention.
- (3) A stubborn cystitis.
- (4) Intolerance to the indwelling catheter.
- (5) A prostatic tumor of enormous proportions.

In spite of the fact that my results and mortality with the one-stage operation have compared most favorably with those of the two-stage, and, although a patient occasionally dies after the preliminary cystotomy, an exitus that would have been illogically charged to the one-stage operation had prostatectomy been performed at that time, I am nevertheless leaning more to the two-stage operation for the following named reasons:

- (1) A more complete bladder drainage is obtained than by urethral catheter drainage.
- (2) Less shock at the second operation.
- (3) There is not so much likelihood of perivesi-

cal infection, although I think that all of us have encountered malignant infections that persisted in boring pockets following even the two-stage operation.

(4) Less congestion and swelling of prostate, due to absence of the irritating indwelling catheter. Less edema of bladder neck.

(5) No absorption of the occasionally very toxic urethral pus caused by the irritation of the catheter.

(6) Bladder is kept freer from infection.

(7) Less likelihood of epididymitis.

OPERATIVE—After the patient has been thoroughly prepared and stabilized, the important consideration is to remove the prostate with as little shock as possible. For this the suprapubic operation is ideal, in that it rarely requires more than seven minutes for its performance.

OPERATION—FIRST STAGE—After exploring for stones in bladder or in diverticulae and for papillomata, etc., a sufficiently stiff one-half inch rubber drainage tube is introduced into the upper posterior wall of the bladder, and tightly secured by a purse string or other suture. The prevesical fascia is brought together with No. 1 continuous gut. In peeling up the peritoneum, care is taken not to separate the bladder from its anterior attachments to pubis and muscle. This requires some gentleness, but is worth the effort. Rectus fascia is sutured with *interrupted* No. 3 catgut to prevent hernia. Fascia and skin are sewn loosely around tube to insure free drainage of serum. Pezzer catheters get pinched, kink and tear, and their caliber is not large enough. I have never used them to any extent.

OPERATION—SECOND STAGE—The entire surface of the suprapubic opening is sharply curetted. I stretch the incision very little on account of the possibility of tearing the peritoneum. The incision is continued downward and if necessary a rectus muscle with its sheath is cut transversely, each to be carefully sutured with interrupted sutures later. After enucleation the rim of the bladder incision is freed from the rectus muscles and tightly sutured around a one-half-inch rubber tube, after which the muscle and skin are sutured separately. It is necessary to free the skin from its deeper adhesions before suturing it with the marine stitch. It is to this thorough method of suturing that I attribute the rapid healing and dry condition of the patient during convalescence. During the past two years several nurses have remarked that my cases remain clean and dry, "just like abdominal cases." *Hemostasis*: During the past ten years I have not seen fit to modify my procedure of tightly packing the entire bladder of those rare cases that bleed on the table, or of those cases that have tumors of such large size that they are potential bleeders and likely to bleed later on, even though they remain dry on the table. The pack is removed fractionally every three hours during twelve to eighteen hours. Of course, there is no room for a tube when the bladder is tightly packed. When the pack is removed, an indwelling catheter is inserted in the urethra. Pituitrin, in addition to being supportive, is also hemostatic.

POST-OPERATIVE TREATMENT—Frequent sips of

hot water, later water of room temperature. Pituitrin every four to six hours for several days. Digifoline thrice daily when that support is indicated. Morphine grains one-eighth plus atropine grains one-three hundredth if there is pain. Eggnog every three hours. Sitting position a few hours after operation, with occasional changes of position. *Enemas* and colon tube as soon as there are any gas pains. An enema is soothing and affords great relief from the pressure of gas-filled bowels upon the sore bladder. *Oliguria*: One thousand cc. intravenously of soda and glucose solution daily. Diuretin twenty grains thrice daily. The administration of 2000 to 3000 cc. of intravenous solution daily to elderly individuals will, I am sure, in a fair percentage of cases break down myocardial compensation, as will also the administration of a large amount of fluid by mouth. Myocardial weakening is the most treacherous complication that can occur, and the surgeon who can keep the myocardium in a stabilized condition will have the lowest mortality. *Pernicious hiccup* is stopped by hypodermics of morphine and atropine every two hours. *Hemorrhage*: A 5 per cent mixture of aluminum acetate in water is the most effective local injection. If this does not control, the bladder must be packed under an anesthetic. I have never found it necessary to pack a bladder post-operatively. Lately I have found fibrogen a valuable remedy. *Irrigations*: I frequently do not irrigate the bladder till the second or third day following operation, and then only with boric acid in the morning, supplemented by an instillation of 5 per cent argyrol in the evening. Instead of every day disturbing the sore prostatic pouch, which is doing its best to get along, I affect a compromise by having the nurse irrigate the drainage tube and bottle instead twice daily with mercuric chloride solution. This, together with keeping the suprapubic tube and incision carefully cleansed with alcohol does, I am sure, contribute to the freedom of infection which many of my patients have enjoyed. Cleanliness is next to Godliness, and its rigid application in these cases must be insisted upon to the same degree in which it is applied by the orthopedic surgeon. *Infection*: Infection in the prevesical space yields to swabbing with tincture of iodine and, if necessary, frequent instillations of mercurochrome 1 per cent. Infection of the prostatic pouch is treated by irrigations of silver nitrate, acriflavine, and instillations of 10 per cent argyrol. Pyelonephritis is treated by the usual methods and intravenously with 20 cc. of 1 per cent mercurochrome solution. My experience with mercurochrome intravenously in acute infections has caused me to regard it as one of the most valuable drugs that have been added to our list in a long time. It has been some years since I have had a sloughing wound in private practice, even in those cases complicated by stone. Careful operative technic, aseptic and antiseptic measures are responsible for this. It has been my observation that it is the germs that are brought in from the outside, and not those already there that do the damage. *Healing*: The small sharp curette is an invaluable instrument for removing redundant tissue and for freshening the suprapubic opening. Its discriminating use is an important factor in rapid healing in some cases.

Necrotic fat or other tissue should be promptly removed with a long thumb forceps. *Fever* is most commonly due to constipation and less commonly to infection.

GOING HOME too soon causes epididymitis, due to the many added strains that the patient is tempted to assume as soon as he arrives there. A few added days of sitting in a chair, with but little walking around the hospital, is the best for the patient. As soon as he begins to walk he should wear a scrotal suspensory and continue to do so for several months. Patients with high blood pressure must be cautioned against overeating and overwork. Their blood pressure should be watched and controlled.

PNEUMONIAS, although rare, I have seen occur almost as frequently in those who were undergoing preparatory treatment as in those who had been operated upon. I have seen almost as many patients develop pneumonia following spinal as following ether or gas anesthesia. I believe that an infected environment, plus hypostatic congestion, play a far more important role than does the irritation of an ether anesthetic, although I do attribute one of my exits to this cause.

RESULTS—I have had one case of impotence following prostatectomy. After one year, however, the potency in this 67-year-old patient had improved to a condition better than that of the average man of his age. Recently I had a case of troublesome paresis of the bowel that persisted for four days following a spinal anesthetic. Since this condition, however, may occur after any pelvic operation, regardless of the type of anesthetic used, it would be unfair to discriminate against spinal anesthesia on this account. Dr. Crane at the Los Angeles County Hospital, in checking up on the residual urine of eighty-six patients before they left the hospital, found that 3 per cent had residual urine of as much as three ounces, 10 per cent about one ounce, and the remaining 87 per cent had none at all.

My first Los Angeles prostatectomy, performed almost nine years ago, is still living and in good health.

CANCER—Some four years ago I inaugurated the procedure of partial suprapubic prostatectomy for cancer of the prostate. I reported two cases. Inquiry today revealed that they are both in fair shape. One of them was operated upon four and one-half years ago, and is under the care of Dr. Granville MacGowan; the other was operated upon five and one-half years ago. Some time ago, having had the co-operation of Dr. Percy in some work on cancer of the bladder, I was impressed with the probable good results that could be achieved by the cautery method in cancer of the prostate. I have employed the method in several cases lately, and am inclined to believe that, by burning out the whole prostatic mass with the cautery and supplementing this by radium later on, we have the best procedure for attacking this condition. The operation is tedious, requiring sometimes two hours, the technic being to keep on burning until the *soft* surrounding tissues are felt.

MORTALITY—As has been so aptly stated: "Put a hundred men, varying from 60 to 95 years of age,

to bed for a few weeks and it need occasion no surprise if one or several of them die from something or other, even though no operation is performed." Taking this fact into consideration, urologists must congratulate themselves all the more for the very low mortality that they have been able to maintain in suprapubic prostatectomy—ranging from one-fourth of 1 per cent to 5 per cent. During a six months' service at the Los Angeles County Hospital a year and a half ago, I operated upon thirty-three unselected cases, some of whom appeared to be rather poor risks, but all of them recovered, a result due largely to the alertness and painstaking care of Dr. J. J. Crane, resident urologist. Gardner has reported 240 consecutive suprapubic prostatectomies, without a death. I have not had a death in private practice in about three and one-half years. Since urologists have, during the past ten years, built up a system of procedure which has made possible the restoration of health and function to the patient and the adding of years of comfort to his life so that he need no longer be subjected to a life of suffering, coupled with impaired physical and mental activity and, in many cases, early death, I hold it to be our duty to correct any mistaken impression that may exist among some of the laity that prostatectomy is a dangerous operation and leaves the patient impotent, a dribbler, or with some unhappy sequelae; because the simple, shockless procedure of suprapubic prostatectomy may be unhesitatingly recommended as a cure for this condition.

610 South Broadway.

DISCUSSION

LOUIS CLIVE JACOBS, M. D. (Flood Building, San Francisco)—Dr. Rosenkranz's paper is a valuable contribution to modern surgery of the prostate. It deals with a large number of procedures which are essential to the complete recovery of the patient. For when all is said and done, an operation for the removal of the prostate is not a therapeutic success unless the candidate is in good physical condition, say, three months following the prostatectomy. To achieve this result, is the ambition of every urologist. Hence, we see the importance of the preliminary treatment and preliminary investigations.

I make a routine cystoscopic examination, roentgenological examination, complete blood examinations, with estimation of the blood urea and a urine examination in every case. Blood creatinin is a valuable index of the kidney function, but the laboratory estimation of the same is unreliable on account of the variation of the colorimetric reading with a standard that is unstable.

In regard to the fractional emptying of the bladder and the insertion of the indwelling catheter, I am heartily in accord with what the doctor states. Recently, I saw a patient in consultation, from whom a very large amount of urine had been withdrawn at the first catheterization. This was followed by a hemorrhage, and shortly afterward the patient died from anemia of the heart muscle.

There has been a noticeable decrease in the mortality from prostatectomy in late years, especially in urological services under the supervision of genito-urinary surgeons, such as Dr. Rosenkranz. This is due, I believe, to the determination of the surgical risk and the minute and painstaking attention and care given to the pre-operative and post-operative phases of the surgery.

As regards the choice of the one or two-stage operation, I am a strong advocate of the single-stage procedure. Usually it can be advantageously performed, though there are some exceptions where the two-stage method should be done. The suprapubic approach reduces the post-operative complications, such as fistulae

and impotence, to a minimum, and is, therefore, the procedure to be preferred. There should be a minimum of time consumed in the actual removal of the prostate, and in my experience the anesthetic of choice is "gas and oxygen." My patients are usually conscious within five minutes of the tying of the last suture. Sodium citrate solution should be administered per rectum immediately, and fluids in moderate quantities fed through the mouth. As a safeguard against embolism, nothing should be administered per rectum after twenty-four hours have elapsed.

The following points in the doctor's operative technic are of prime importance and, to my mind, cannot be too forcefully mentioned:

Not to separate the bladder from its anterior attachments.

Incise into the high part of the bladder.

The doctor's methods for controlling hemorrhage and for draining the bladder are excellent. I pack all my cases with three-inch gauze, and allow it to remain to the third day. Occasionally, I place a tube alongside of the gauze. I never insert a catheter into the urethra until at least ten days have elapsed, and sometimes not until three weeks. If I encounter severe hemorrhage during the operation, I aspirate with the air-suction aspirator inserted into the wound and, with the bladder wall retracted, suture the capsule of the prostate.

The pharmaceutical preparations enumerated by Dr. Rosenkranz are all of great assistance in sustaining the patient, and should be used wherever indicated. Just two more drugs, I believe, deserve mention, and those are camphorated oil and caffeine.

As regards residual urine, following the removal of the prostate, this is almost always due to tags of prostatic capsule or small portions of adenomatous tissue lying in the posterior urethra, and it would be necessary in these cases to fulgurate them through the cysto-urethroscope.

ROBERT V. DAY, M. D. (412 West Sixth Street, Los Angeles)—Doctor Rosenkranz has given us a very complete and most excellent discussion of prostatism and its cure. Everyone must agree with him that the preparation of the patient is the most important part. In the bad risk I prefer the two-stage operation. With the younger patients—say under 70—without evidence of serious cardio-circulatory disturbance or irreparable damage to the kidneys by reason of the long-continued back-pressure, the one-stage operation is probably the one of choice. We control bleeding in the one-stage operation by suturing the posterior lip of the bladder neck, followed by the use of the Pilcher bag. With the two-stage operation, however, it is difficult to suture the bladder neck, and we rely entirely on the Pilcher bag. The bag causes much less distress than gauze packing.

In the main, I agree most heartily with Doctor Rosenkranz. However, I am opposed to indiscriminate medication, such as bitter iron tonics, diuretin, urotropin, calcium chloride, etc., because they are apt to upset the patient's digestive apparatus. (Digitalization is frequently necessary.) Iron and vitamins are so abundantly present in spinach, egg-yolks, and milk that such medication would seem superfluous. Water, lemonade, fruit juices, and buttermilk are the best urinary antiseptics and diuretics. Enemas often cause tenesmus and are occasionally responsible for the dislodging of a clot with resulting pulmonary embolism. Unless the patient is in great shock I never give intravenous salt, glucose, or sodium bicarbonate, for the reason that most of these men have emphysema and chronic bronchitis, and large amounts of these substances perhaps favor pneumonia. Sodium bicarbonate, after sterilization by heat, contains a considerable amount of sodium carbonate, and almost always causes a severe chill or reaction. Hemostatics are not necessary if the bleeding is properly controlled by suture and hemostatic bag.

Spinal anesthesia is invaluable in a majority of suprapubic prostatectomies. It got a bad name when the anesthetic agent used was stovain—a very toxic and dangerous drug for spinal anesthesia. We have records of over 5500 cases of spinal anesthesia used in the Los Angeles General Hospital since 1910 on the urologic and

rectal services, and many hundreds prior to 1910. The anesthetic agents in this series were tropacocain and novocain, either one of which is satisfactory.

JAY J. CRANE, M.D. (Westlake Professional Building, Los Angeles)—Dr. Rosenkranz's paper is very complete. He has dealt with all the different points very thoroughly that lead to a low mortality, and the complete restitution of the patient operated upon for prostatism. Dr. Rosenkranz has had a wide experience, and the results he has had I know have been excellent, for I have seen many of his patients cured and out of the hospital in four weeks, and I am glad to have him put down in writing the things he pays particular attention to, so that we can follow his suggestions.

It is routine at the Los Angeles General Hospital to do a roentgenological examination of the urinary tract, a complete blood chemistry, a complete urinalysis, kidney efficiency test with phenolsulphonephthalein and a bladder cystoscopic, besides the routine physical examination, which includes the blood pressure on every candidate for a prostatectomy. In following this procedure, it is not infrequent that we pick up symptomless renal calculi, diverticuli, bladder calculi, strictures, and cancer, any one of which might be overlooked, were this routine not followed, thereby changing a good prognosis to a more doubtful one. As Dr. Rosenkranz has said, one cannot depend solely upon laboratory test. The patient must feel good, and have a good moist tongue, as well as a good kidney function and blood chemistry.

In spite of the fact that many brilliant results have been obtained with the one-stage suprapubic prostatectomy, I am in favor of the more conservative two-stage method. It has been my observation that the patients operated upon by the two-stage method have, as a rule, as short a convalescing period as those that have the one-stage operation. It is a fact that most of the poorer risks receive the two-stage method, so why not conserve the strength of the patient in better condition also, for he will usually make a much better convalescence. A vasectomy done at the time of the suprapubic cystotomy will eliminate the embarrassment of an epididymitis when the catheter is replaced in the urethra. I have had patients tell me that they suffer more with an epididymitis than with a prostatectomy. Just recently it became necessary for me to do an orchectomy one month after the patient had left the hospital and had a normally functioning bladder. The patient developed an epididymitis, which broke down and had to be opened twice. Abscesses continued to form until the sloughing epididymis and testicle were removed. This would not have happened had a vasectomy been performed at the time of the suprapubic cystotomy.

Dr. Rosenkranz's method of controlling hemorrhages by packing the prostatic cavity and bladder at the time of operation is absolute. As Dr. R. V. Day has said many times, after packing the bladder you can go home and sleep, without fear of hemorrhage. It is true that this procedure is painful, but unless the wound is sutured too tightly I do not believe it is any more painful to the patient when the pack is removed than when a bag used for the same purpose is removed, and it does control the hemorrhage. There is no question about that. A small pack in the prostatic cavity, unless held by a sponge holder strapped by adhesive to the belly wall, or by a catheter through the urethra, is, I believe, dangerous, for a hemorrhage of any moment will usually carry the pack to the fundus to obstruct the outflow of urine and blood through the incision, allowing the bladder to fill up with blood clots. Dr. Rosenkranz's rule of packing the bladder of all cases that have very large prostates, and of those who show a tendency to bleed at the time of the operation, is a very safe and conservative method.

I am of the opinion that the spinal anesthetic is by far the safest anesthesia for both stages. I have found many patients who are more afraid of being put to sleep than they were of the operation, and who would submit readily to the operation if they could escape a general anesthetic. I believe the majority of cases will make a better convalescence following spinal than following any other form of anesthesia.

I have found that the tube put in the wound for drainage at first when a pack is not used should be large.

Nothing under one-half inch in diameter should be considered. When the pack is removed, such a tube should be put in for a few days. As soon as all gross evidences of hemorrhage have subsided, the two-inch tube may be readily replaced by a Pezzer catheter, which will not retard healing of the wound during the following ten days, allowing the prostatic cavity to heal unmolested. At the end of ten days a catheter can safely be inserted through the urethra, allowing the suprapubic wound to close.

DOCTOR ROSENKRANZ (closing)—The reason that I have stressed close observation and safeguarding of the myocardium is that there has not been evolved a satisfactory measurement of cardiac reserve. The spirometer does at times, however, seem to be of some use in checking up this most important factor. I take daily blood pressure readings post-operatively, and keep the pressure at a satisfactory level with pituitrin and strychnine.

As regards mercurochrome irrigations, it is well to bear in mind that mercurochrome is mercury, the daily administration of which may cause a local sclerosis, so that I would not recommend it for continued daily usage.

The reason why some cancers are of very slow growth or have their growth arrested following their partial removal, or why some of them even get well spontaneously following such removal, is not known. I have discussed the subject with Dr. Percy, and he has noticed that occasionally patients have gotten well following partial removal with either the knife or the cautery.

Dr. Day and Dr. Jacobs have advocated the suture of the capsule in cases of bleeding. About three years ago, on inserting my finger through the suprapubic incision into the prostatic urethra prior to enucleation, I felt a large artery pulsating in the urethra. The artery was almost one-half centimeter in diameter, and was palpated by Dr. Crane and the resident urologist of the General Hospital. I expected a lively hemorrhage, and got it. It was, however, immediately and completely controlled with the bladder pack. I have never found it necessary to resort to any other expedient. The pack does occasionally cause some pain. This can, however, be satisfactorily controlled with morphine, and I have had some patients in whom a tight bladder pack has not caused pain. I learned the bladder pack from Colonel Freyer. During the International Congress of Surgeons in London in 1914, I saw him remove the two largest prostates that I have ever seen. The blood spurted and welled out of the suprapubic wound in each case, as was to be expected. He immediately packed the entire bladder in each case with a five-inch roll, which completely and immediately checked the bleeding. I shall always remember his technic as one of the most valuable points that I have ever picked up, and I believe that, in time to come, this method of packing will be used with increasing frequency. It is safe, sure, simple and immediate in action.

I am glad that Dr. Jacobs stresses preliminary roentgenological, blood chemical and cystoscopic examinations, for, although the laboratory sometimes misleads us, it does at times give us a danger signal that would otherwise have been withheld.

As regards the danger of embolism following an enema, I may add that I use a soft catheter and that nothing has afforded my patients greater relief after operation than has the enema for removal of gas. Colon tubes I have found to be absolutely inadequate. I believe that many cases of so-called embolism have been something else. I have known of patients to pass out while straining at stool, and while sitting up in bed eating a meal. Both cases were attributed to embolism, but there was no post mortem. I have had one case of infectious embolism that recovered. Ten years ago I removed a very large prostate, together with a large calculus from a patient who had had a large prostate removed perineally some years previously. His bladder was very badly infected. About three days after operation I found him with a paralysis of the tongue, paralysis of pupils and one side of the face, etc. He also had a putrid and severe pneumonia. It was a case of brain and pulmonary embolism combined. This patient had a wonderful constitution, and is living and well today.

As Dr. Daly has suggested, we must use discrimina-

tion in medication. I have used cod-liver oil, properly emulsified, so as to render it palatable, and I am sure that it has built up the health of certain patients.

I wish to thank Dr. Jacobs, Dr. Day, Dr. Stevens, and Dr. Crane for their good discussions.

Spinal Drainage: Value in the Treatment of Early Poliomyelitis—The data gathered by J. C. Montgomery and W. C. C. Cole, Detroit (Journal A. M. A.), in twenty-six cases of poliomyelitis strongly suggest a possible beneficial effect on the outcome of the disease to be derived from early and repeated subarachnoid drainage. Vomiting was noted as the predominating initial symptom. Fever was the symptom complained of in thirteen cases. Headache was noted relatively rarely, although at some time during the course of the disease it was present in 70 per cent. Pain was noted in only 54 per cent. Fever occurred in every instance, and vomiting was noted in 60 per cent of the cases. Some redness or injection of the tonsils or pharynx was noted in practically every instance and persisted from one to two weeks after the onset of the illness. This was a matter of varying intensity; in some cases there was only a mild redness and in others a severe angina, the hyperemic area extending up into the nasopharynx, where a grayish-white exudate was almost invariably seen. Hyperesthesia was noted in every instance, although it, too, varied considerably in its intensity. Irritability was observed in about one-half the cases, although it was somewhat more constantly present in the early ones. Of the clinical signs, aside from hyperesthesia and pharyngitis, those most constantly present were neck rigidity and resistance to anterior flexion of the spine, these signs being found in 92 per cent of all cases, or in all but two. The reflexes were most unproductive of information in early cases. They were found normal, exaggerated, sluggish and, absent. The most that could be learned from them was that only in rare instances were they normal, and in one or two instances a difference between the two sides was of some help in arriving at a diagnosis. In two cases erythema of the face and neck was noted, and in one instance a definite punctate scarlatiniform eruption was present over the chest and back. This rash was so suggestive of scarlet fever that such a diagnosis was held probable, particularly in view of the severe angina that was present, and the absence of meningeal irritation. It was only when paralysis occurred that the true nature of the illness was recognized. Estimates of spinal fluid pressure were based on experience regarding rate of flow. While the pressure apparently varied in its intensity, nevertheless it was definitely increased in every instance except two, and these were beyond the acute stage. Similarly, the amount of fluid was increased in every instance except one. The degree of pleocytosis varied from 10 to 800. In some instances, when puncture was performed in the extremely early stage, practically no increase was detectable. It was a frequent experience that the cell count was higher on the second, third and fourth days of meningeal invasion than on the first day, even in the face of definite improvement symptomatically. This led to the conclusion that in those instances in which an extremely large amount of spinal fluid under great pressure is found, a cell count of 10 or 15 should be regarded, in a child at least, as a definite increase. It seems logical to assume that this low count at the first puncture may partially be explained on the basis of dilution. It has been the authors' practice, as soon as a diagnosis of poliomyelitis was suspected, to perform a lumbar puncture. If this showed definite increase in pressure, with or without a pleocytosis, it was repeated at twelve or twenty-four hour intervals until the pressure had definitely subsided. This usually occurred in about three or four punctures, and it was the usual experience that after pressure had once subsided it did not recur.

From the present study of the data supplied by the school districts it is estimated that about 12 per cent represents the amount of defective vision found among school children in the United States under the present methods of examination.—National Committee for the Prevention of Blindness.

Clinical Notes and Case Reports

ALLERGIC DERMATITIS

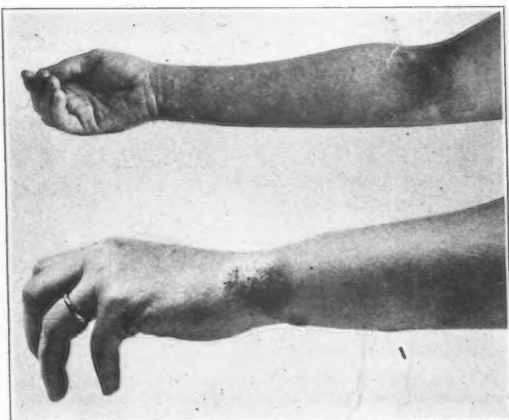
REPORT OF A CASE DUE TO MOHAIR

ALBERT H. ROWE, M. D., AND HOBART ROGERS, M. D.,
Oakland, California

Mrs. E. C. L., age 32, came to us May 26, 1925, complaining of an eczema which had for two years affected both forearms. The lesions when they first appeared had had a marked weeping tendency, but at this time were dry and scaly. Itching was a marked feature. The distribution of the lesions is shown in the accompanying unretouched photograph. At no time had lesions appeared on any other part of the body.

The condition had been treated previously by means of the lotions, ointments, and diets commonly prescribed by dermatologists. At one time the patient had for four months not allowed water to touch her forearms. The use of x-ray had served to control the weeping tendency, but had really benefitted the condition very little.

There was a positive history of allergy. The patient's mother had had hay-fever as a child. The patient her-



self had had hay-fever in her youth while a resident of Ohio. Her one child, 10 months old, had had eczematous lesions at the age of 3 months.

Food-testing by the cutaneous scratch method revealed only delayed reactions to raspberry, apricot, and banana, which reactions we felt were probably without significance. Tests with animal emanation proteins revealed immediate positive reactions to goose feathers, cattle hair, horse hair, dog hair, rabbit fur, sheep wool, and a marked reaction to goat hair.

The marked reaction to goat hair led to careful questioning as to contact with mohair. The patient then remembered that she had received a mohair upholstered overstuffed chair on January 25, 1923, that her eczema first appeared the first week of February following, and that the only period of improvement she had had was six weeks spent away from home.

Our instructions were to remove this chair from her home and to avoid allowing her skin to come in contact with any mohair, animal fur or wool. Improvement began about June 15 and continued uninterrupted to the complete disappearance of the lesions, despite the fact that she had gone to the beach and was bathing in salt water every day. Her arms have now been entirely free

from lesions for one month. We do not deem it advisable to subject patients to a series of injections for desensitization when an exclusion therapy is so simple and so highly successful.

COMMENT

This case is illustrative of a very important group of dermatoses due to protein sensitization. Some few of these may perhaps be solved clinically, but in most, as in the present instance, the essential information will be withheld until the results of protein skin-testing have given the proper direction to the questioning. The patient is seldom able to associate his trouble with its cause. The only safe rule is to insist on complete and thorough protein skin-testing in all cases of unexplained or refractory dermatitis. If there is a positive history of allergy, skin testing is imperative. Positive reactions point the way to a specific therapy. In no field of medicine are results more spectacular or patients more grateful.

USEFUL APPLIANCES IN THE TREATMENT OF SOME COMMON INJURIES

By HARRY M. WEGEFORTH, M.D., AND
ARTHUR WEGEFORTH, M.D.,
San Diego

In treating patients with several fingers injured or infected, it is often difficult to redress them without causing considerable pain.

Having found that by using a perforated piece of celluloid

rounded off and covered with a strip of adhesive plaster. This will prevent irritation of the integument between the base of the injured finger and those adjoining it.

With this splint it is easy to apply a dressing that is both satisfactory to the patient and the surgeon, because all that is necessary, after the wound has been properly prepared, is to fold, in the form of a finger of a glove, the gauze on which ointment has been applied. If moist dressings are desired, the gauze, saturated with Dakin's solution, is applied around the finger so as not to interfere with the circulation of the blood. If continuous wet dressings are indicated, all that is necessary is for the patient to pour on the dressing, from time to time, the required amount of Dakin's solution, salt solution, or whatever solution is desired.

Among the many advantages of this method of treatment are:

1. That the splint can be easily removed and the finger exposed to the active rays of the sun or ultra-violet rays.
2. That it permits easy examination of the injured finger, without causing unnecessary pain.
3. That it lessens the danger of disturbing granulating tissue, as all that is necessary is to gently remove the wet dressings which do not adhere to the wound and replace them with new dressings, slipped over the end of the injured finger.
4. That the end of the celluloid splint projects about one-half an inch beyond the end of the finger, and thus affords protection from the danger of striking the injured part against objects.

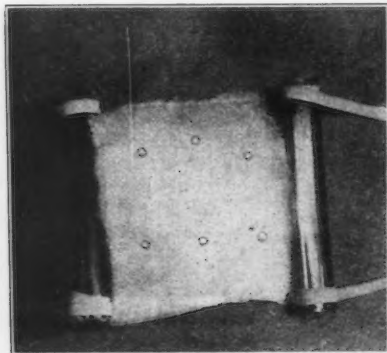


Fig. 1—The use of celluloid in the treatment of ulcers of the external abdominal wall.



Fig. 2—Materials used in making a celluloid splint.



Fig. 3—Application of celluloid splint to finger.

loid in treating ulcers of the abdominal wall we were able to prevent pressure on the wound and to avoid soiling of the bed clothes, we decided to apply this principle in the treatment of injuries to the fingers in order to overcome the annoying pain caused by the usual redressings and to give more satisfactory support in the case of fractures.

Ordinary celluloid, such as is used by automobile-top manufacturers, is satisfactory. Pieces are cut a little longer than the finger, overlapping about one-third of the distance. In order to avoid overheating and possible maceration of the tissues when saturated dressings are applied, the celluloid is perforated at several places by means of a harness punch.

In making a splint for the injured finger, a normal finger can be used for the purpose of shaping the celluloid. Allowances in size should be made for the type of dressings that is to be used.

The splint is retained in shape by means of pieces of adhesive plaster about one-quarter inch wide wound two or three times around the celluloid. In order to avoid the slipping of the splint, the proximal end may be perforated and the splint attached to the wrist by means of a piece of tape.

The sharp proximal ends of the splint should be

5. That in case of fracture, especially in compound fractures, the splint acts as a support for the fragments, 400 Granger Building.

A Workman's Compensation Bill Allowed—Recently a workman repairing automobiles was injured, and the foreman called a physician who was not employed by the insurance company that insured the automobile concern under the Workmen's Compensation Act. The physician rendered a bill to the employer of the patient who turned the bill over to the insurance company. The latter obtained a ruling from the Industrial Accident Commission, reducing the bill to about half its original amount. The question then arose as to whether the Industrial Accident Commission had the jurisdiction to reduce a physician's fees rendered unconditionally to the employer and at the employer's request. The municipal court of Boston rendered a decision in favor of the physician for the sum he claimed. The judge found that the physician was unconditionally employed by the employing corporation, which was liable for the full amount of the physician's bill.—*Journal Iowa Medical Society.*

It is more important for a doctor, no matter what character of medicine he practices, to have adequate malpractice coverage than it is to insure his automobile.

EDITORIALS

TWENTY-THREE YEARS

With this issue CALIFORNIA AND WESTERN MEDICINE completes twenty-three years in the field of medical journalism. They have been years of growth. Stunted at times for want of sustenance, but never to the extent of "malnutrition." Neither CALIFORNIA AND WESTERN MEDICINE nor any other publication can any more please all of its readers than can any physician please all of his patients. Neither is it possible to please all of the more than 4000 owners of the magazine. We are not stupid enough to make the attempt. What CALIFORNIA AND WESTERN MEDICINE does try to do is, to live up to a fair, square, definite policy fixed by the Council of the California Medical Association, and interpreted by the editor and his counselors. The result is pleasing to most of the owners. *Thousands* of encouraging letters during the past year testify to that fact. There have been a few of the other kind, and if there were not, we would feel quite certain we were not going anywhere in particular.

CALIFORNIA AND WESTERN MEDICINE is dangerously weak in one particular. It needs a substitute editor who should be warming up. But for the moment we are all here—a happy family.

Our best wishes for a Merry Christmas and a Happy New Year to our associates, owners, printers, readers, and even our enemies—God bless them.

BACK TO YOUR PERSONAL DOCTOR

The signs of the times seem to indicate rather definitely a growing movement to have less ballyhoo, fewer "health centers," clinics, and what not, directed by non-medical organizations and public health "officers," less "*officially directed personal health*" in general, and a return to the personal health doctor for personal health assistance and advice both in keeping well and getting well.

One of the most recent and significant bits of evidence supporting this prophecy is the wise attitude of the Federated Women's Clubs of Illinois. This great organization, instead of attempting to operate health centers, clinics, and generally practice medicine themselves, have established co-operative plans with the Illinois Medical Association and the Illinois Dental Society, by which the Women's Clubs will exert themselves to have all "pre-school" children examined by *their own family doctors and dentists*. The public health authorities furnish the blank forms.

"The plan involves," says the Illinois Medical Journal, editorially, "the emphasis of the personal responsibility of each member of the Federation for the children of her own household. It is asked merely that each of the 70,000 members see to it that one pre-school child, either of her own household or her neighbor's, or some child in her immediate community, is *taken to the family doctor and dentist for this complete examination*. Blanks for this purpose will be supplied by the State Depart-

ment of Health. Each member of the federated clubs in the ninety-three counties of Illinois, where there are active county medical societies, will be furnished a list of all members in good standing in the county medical society of her county. It will be made very clear that this examination must be handled by a doctor of medicine, and an explanation will be given in detail of what the single standard of medical education can guarantee as to the character and ability of the physician.

"This means a certain responsibility on the part of the county medical societies. They are asked to give friendly support to this effort to get children, apparently well, into their *own offices*."

That is as it should be. It is rendering a fine service in the way it should be rendered. As we have stated repeatedly, it is no more trouble to take a child to a doctor's office than to a clinic. The service is precisely as good and much more satisfactory because the patient goes to the doctor of his choice. It is cheaper to all parties, and particularly to those who pay *public bills*. It promotes the cause of public health as it should be promoted. It avoids the rush, hip hurrah and circus methods of health centers and the not insignificant exposures to infection in crowds of children as they are huddled together in most "free clinics." Above all, it allows the child to get acquainted with *his doctor* instead of the facets of a machine. There are enough doctors, and to spare. They are not all Emmet Holts, it is true, but they are the best we have, and a good average at that. Certainly, they are not inferior to those who do the work for "health centers." Mostly they are the same doctors.

With the co-operation of 70,000 club women of 700 clubs in Illinois, under the presidency of Mrs. George Thomas Palmer (wife of a physician) and under the immediate direction of Doctor Lena K. Sadler, Chairman of the Child Welfare Department, every child of every group (pre, in, or past, school) can be sent to his own doctor's office and examined in a few days, without causing any special flurry.

Since CALIFORNIA AND WESTERN MEDICINE has been agitating similar methods, we have been told that some doctors would not do the work. We don't believe it, but let us find out who they are, if any. There are plenty who will. Again we have been told that some doctors would neither examine nor treat the poor without pay. Again, we don't believe it. But again let's find out who they are, if any. And again, there are plenty who will assume the privilege.

Personal health service—preventive and curative—by your own doctor, or your own personal health counselor, as President Vincent of the Rockefeller Foundation prefers to call him, is a mighty fine health-promoting slogan.

A little more encouragement of movements in this direction and more public health departments will devote more of their time and money to valuable and much-needed *public health* work and less to the practice of personal health. Finally, and most important, it will make unpopular—to extinction—the fad of practicing medicine by incompetent organizations and groups and the pestering of the giving

public for funds with which to propagate themselves. Every five-hundredth person, including men, women and children, in California is an educated doctor of medicine whose office is the only kind of health center our people need. Why centralize groups of them—these same doctors—in “health centers” with expensive overhead that the public must support?

EPHEDRINE, A PROMISING THERAPEUTIC AGENT

Tasted by the Emperor Shen Nung about 5100 years ago and placed by him in the “medium class,” and described by Li Shih Cheng in 1596 A. D. as a diaphoretic, circulatory stimulant, antipyretic, cough sedative, etc., ephedrine emerged from seclusion in 1887, though really its possibilities have been fully revealed only within the last two years. Ephedrine is the active alkaloid of *Ma Huang*, or *Ephedra vulgaris* var. *helvetica*, closely resembling epinephrine in its actions qualitatively, but differing quantitatively and in some other important particulars. Recent studies of the drug, which is an ingredient of many famous Chinese prescriptions, have been made by the Chinese pharmacologist, K. K. Chen, and by Chen and Schmidt of the Peking Union Medical College. Fortunately, the results of a very recent clinical study made by Miller of the University of Pennsylvania Hospital, supported by the Council of Pharmacy and Chemistry of the American Medical Association, parallel and confirm those of the animal work by Chen and his associates. The promising therapeutic usefulness of ephedrine and its advantages over epinephrine merit attention at this time, though undoubtedly further and extended clinical trial, which is promised by Miller and others, will finally determine its place in the therapeutic armamentarium.

The crude drug, *Ephedra vulgaris*, yields two alkaloids, namely, ephedrine and pseudo-ephedrine, the latter being isomeric with ephedrine and their physiological actions are identical. Ephedrine was first isolated by Nagai in 1887. Its formula is $C_{10}H_{15}N$, and chemically it is stated to be phenyl 1-ol 1-methyl 2-methylamine 2-ethane. Its salts crystallize well and dissolve in water. According to Chen and Schmidt, the watery solutions remain active after exposure to air and light for forty-five days. The solutions remain colorless and can be boiled without loss of activity. There is no doubt, therefore, that ephedrine is more stable than epinephrine and this is a decided advantage. Its greater stability *in vitro* suggests at once that its pharmacological actions would be more lasting than those of epinephrine, and this was found to be the case in the careful and extensive studies of Chen and Chen and Schmidt.

The outstanding effect in animals, according to these investigators, is circulatory stimulation, characterized by marked cardiac acceleration and a sustained rise of blood pressure lasting 30 minutes and longer. The cardiac acceleration is due to stimulation of the stellate ganglia and the accelerator endings, for the drug stimulates the heart when it is applied locally to the stellate ganglion, and also when perfused through excised hearts. With moder-

ate doses, the heart volume is increased and the rate slowed as the maximal level of blood pressure is reached, thus resulting in an increased output of blood from the heart. With high doses and concentrations the heart is depressed and finally stops from direct paralysis by the drug, though the stoppage is usually preceded by fibrillation. As a result of the increased cardiac output, the diuresis later is increased, though in the beginning it is decreased owing to the marked constriction of renal vessels. The renal vessels share in the vasoconstriction of splanchnic vessels in general, and this peripheral constriction is largely responsible for the initial rise of blood pressure produced by the drug, but later the cardiac acceleration outlasts the vascular constriction and, hence, the sustained pressure is largely cardiac. The vessels of the extremities are much less constricted, the coronary vessels being dilated and the pulmonary, unaffected. Atropine and section of the vagi do not prevent the circulatory effects, and, hence, they are of sympathetic origin.

Other effects are inhibition of the intestine, stimulation of the uterus, relaxation of constricted bronchi, mydriasis lasting about one hour, and increase of salivary, sweat, lymph and gastric secretions. Pancreatic, biliary, and intestinal secretions are unaffected. In man, slight sweating without nausea occurs after taking 0.06 gm. by mouth. The drug cannot be detected in the urine after daily intravenous doses in rabbits, and is presumably destroyed slowly. In a study of twenty-two dogs suffering from different kinds of shock and hemorrhage with low blood pressures, Chen found that 2 to 3 mgms. per kilo of ephedrine intravenously promptly raised the blood pressures. The beneficial effects in anaphylactic shock lasted not longer than one hour and in all other shock conditions for about, or not over, three hours. The drug was ineffective when the pulse was imperceptible, the blood pressure was low for long periods, respiration ceased, and when hemorrhage exceeded 25 per cent. Chen thinks ephedrine breaks the vicious circle of shock, bringing more nutrition to the heart itself, the medulla and other organs, the pulse rate being invariably increased in the shock conditions. He feels it could be used beneficially in surgical shock and hemorrhage.

According to Chen, the toxicity of ephedrine is rather low. The minimum fatal dose intravenously for rabbits, cats and dogs is about 0.07 gm. per kilo. In rabbits, the fatal dose by mouth is 0.6 gm., intramuscularly, 0.34 gm., hypodermically, 0.36 gm. and intraperitoneally, 0.39 gm. per kilo. Convulsions occur only on intravenous injection, and death is due to cardiac stoppage. Recovery from sublethal doses is complete. The ordinary effects of ephedrine can be demonstrated in animals with doses of from 0.25 to 0.5 mgm. per kilo intravenously; and also from 10 mgms. hypodermically or 25 mgms. per kilo into the intestine. In man, 40 to 100 mgms. by mouth cause a definite rise of blood pressure and decrease in pulse rate, the effects beginning in thirty minutes and persisting more than two hours. This result in man has been fully confirmed by Miller. As for the animal studies, the work of Chen and Chen and Schmidt proves conclusively that ephedrine, just like epinephrine, is a sympathomimetic drug, and that it has distinct advantages over epi-

nephrene, namely, that its actions are more prolonged, those of epinephrine being fleeting, and that it is effective by mouth, while epinephrine is not.

The equally good results of Miller in the clinic deserve mention. Miller administered from 0.05 to 0.125 gm. ephedrine sulphate orally or hypodermically to eighty-four patients under controlled conditions. There were no unfavorable phenomena, the patients did not object to taking the drug, and some felt better. The most consistent change was in the systolic blood pressure, elevations occurring in seventy out of eighty-four instances, and amounting to from 10 to 40 or more millimeters of mercury. In thirteen cases no rise of blood pressure occurred, and in six there was an actual fall. The rise reached the highest level within from one to two hours, and then the pressure fell slowly during three or more hours to the original level. The blood pressure rises after oral administrations were about as marked as after the hypodermic, but the action was more prompt after the hypodermic injection. In most cases the pulse rate was slowed, due probably to reflex stimulation of the vagus center from the high blood pressure, and a compensatory phenomenon. X-ray showed the excursions of the ventricles and aortic shadows to be greater than before. The pulse was more forceful and the heart sounds were louder. All of these changes are strictly consistent with those found by Chen and Schmidt in animals. Presumably, the cardiac output is also increased in man and the diuresis, though variable, tended to be increased, according to Miller. Albuminuria occurred in patients with increased blood pressure, and whether there was an irritation of the kidney by the drug or not is not settled. The basal metabolism was increased in two out of four cases, but hyperglycemia was absent.

Important effects were observed on the nasal mucosa. The application of a 5 per cent solution of ephedrine sulphate contracted the turbinates in two and one-third minutes in all seventeen cases tested. The mucosa appeared thin and seemed to fit closer to the bone; the color was pale, but not as anemic as after epinephrine. Relaxation began at the end of two hours and thirty-five minutes. No irritation was present, such as occurs with epinephrine.

In certain disease conditions, Miller obtained definite benefits from ephedrine. Oral administration gave temporary improvement in two cases of Addison's disease, the paroxysmal attacks of a number of cases of asthma were relieved more efficiently than with epinephrine, the subjective sensations of urticaria were relieved, and there was marked temporary improvement in circulatory collapse. Miller concludes that the widest range of therapeutic usefulness of ephedrine will be in the treatment of asthma, hypotension and acute circulatory depression, and in certain congestive nasal conditions. A distinct advantage over epinephrine is suggested in the local treatment of nasal conditions, in nasal sprays for hay-fever, sinusitis, and perhaps as an aid in operations on the nose, etc. Other advantages over epinephrine have been pointed out above.

Thus, it appears that the newer methods of experimentation confirm, extend and rationalize the effects and uses of an ancient drug understood in

a general way and used quite intelligently, though empirically, by the Chinese thousands of years ago. We should be thankful for this belated knowledge, as indeed many a patient may be ultimately grateful to the possibilities that ephedrine holds out. It may be hoped that not only Chinese materia medica, but also that of other oriental and other countries, end even of California, whose medicinal plants have not yet been investigated, will furnish remedies as promising as ephedrine.

Chen and Schmidt: J. Pharm. Exp. Therap., 1924, 24: 339. "The Action of Ephedrine, the Active Principle of the Chinese Drug Ma Huang."

Chen: Proc. Soc. Exp. Biol. Med., 1925, 22:404. "The Acute Toxicity of Ephedrine."

Chen: Proc. Soc. Exp. Biol. Med., 1925, 22:568. "The Effect of Repeated Administration of Ephedrine."

Chen: Proc. Soc. Exp. Biol. Med., 1925, 22:570. "The Effect of Ephedrine on Digestive Secretions."

Chen: J. Am. Pharm. Assoc., 1925, 14:189. "A Pharmacognostic and Chemical Study of Ma Huang (*Ephedra vulgaris* var. *Helvetica*)."

Chen: J. Pharm. Exp. Therap., 1925, 26:83. "The Effect of Ephedrine on Experimental Shock and Hemorrhage."

Miller: Am. J. Med. Sci., 1925, 170: 157. "A Consideration of the Clinical Value of Ephedrine, With a Report on Its Effects in Certain Special Cases."

"THE WAY OF THE TRANSGRESSOR IS HARD"

The tragedy of the Murphy Memorial Hospital, now a familiar story to readers of hospital and health literature around the world, is at last revealing itself in all of its sordidness to the people of the beautiful little city of Whittier, California. Once the Murphy Memorial was a beautiful, well appointed, properly conducted hospital, pointed to with pride by physicians, hospital organizations and intelligent people everywhere. It was rated high in hospital directories as a scientific, health-serving institution and was rendering splendid service to a community much in need of such facilities.

Then certain cults and their cronies of the licensed medical profession got together, put on a referendum and not only repudiated a written agreement between the community and Colonel Simon J. Murphy, the benefactor who built and donated the hospital to the people, but what was even worse, *if possible*, they succeeded in "opening" the hospital as a place for all and sundry to practice their "systems" on those who might be credulous enough to trust their health in such circumstances. After all available means had been employed, without success, to save the situation, the Council on Medical Education and Hospitals of the American Medical Association and the American College of Surgeons removed the hospital from the accredited lists and it was dropped from all hospital directories of standing. The American Hospital Association dropped it from membership. The cultists and their followers were jubilant and broadcast their happiness and, unfortunately for them, their prophecies also.

WHAT HAPPENED

Politics, cultism and sciosophy generally have had full swing now for some five months. During that time the city council and their hospital board have quite thoroughly demonstrated every argument and

every prognosis made by the accrediting hospital agencies against the efficiency of such an institution. *The mayor has resigned under pressure, and the superintendent who played freely into the hands of the opposition has also resigned.*

But let Doctor Horace P. Wilson, an outstanding physician of the community, tell us, as he does in the Whittier News:

"The fiscal report of the board of trustees of the Murphy Memorial Hospital for the year ending June 30 has not yet been made public. *According to the law it was due July 31, consequently it is sixty days overdue.* This is quite contrary to the great publicity the board was to give to the affairs of the hospital. The city has been repeatedly informed that the hospital was full and self-sustaining. The last year of the old board, the hospital seldom had less than twenty-five patients for a daily average, there being over one hundred admissions in August a year ago alone. *For the last three months there have been for days but six to twelve patients in the hospital.*

"A report furnished Colonel Murphy at his request for the five months of the administration of the present regime was summarized by Mr. Darling, an expert, who says that the 'average monthly deficit for period of operation by the old board (no provision for reserves) was \$265.55; monthly deficit greater under present board by \$948.

"The unused taxes left by the old board amounted to \$32,600.79, whereas the present balance as per the report sent to Colonel Murphy is but \$28,038.11, with amount spent for equipment, leaving amount spent from tax fund for operation \$3,877.24.

"In addition to the \$3,877.24 from tax fund, the difference in cash on hand March 1 and July 31, accounts receivable and payable at the two dates, inventories, etc., enter into the figures in such a way as to cause the deficit for the five months the hospital has been under the new regime to total \$6,067.79, or an average per month of \$1,213.55.

"The contention of the new board that no taxes for the support of the hospital need be levied is not based on any evidence that the hospital is self-supporting, but it is evident that they are relying on using for operation the fund left by the old board for the purchase of equipment for the new wing."

"During this period," continues Doctor Wilson, "of five months the hospital has been open to all systems of healing, there has been just one case furnished by other than the medical profession, and that was a medical case.

"The superintendent has been paid monthly \$400 and maintenance. This is the equal of almost any superintendent's salary in the large hospitals. She has been absent from the hospital a great deal and has done personally no active work in the x-ray, maternity or surgical department. The former superintendent's salary was \$225. She was always on duty and could fill a little better than anyone else any position in any surgical or obstetric emergency. The books of the hospital are in such a deplorable shape that an accounting has been almost impossible. The very large deficit has been stated above.

"On August 7, 1925, the hospital, by action of the

American College of Surgeons, was removed from the approved list of standardized hospitals because of having forsaken every essential of such an institution.

"On September 10, 1925, it was removed from the list of accredited institutions by the Council on Medical Education and Hospitals of the American Medical Association. . . .

"We have been without an x-ray specialist, a dietitian, or a staff functioning with a co-operative hospital board, as the entire program has been at variance with the profession that do the work of the institution. The rules and regulations adopted by Mr. Smullin are the expression of a non-hospital mind and so contradictory that they are impossible of execution, and no attempt is made to live up to them.

"*Outside surgeons have almost abandoned the institution and those who have demanded that it be made an outlaw in the hospital world have contributed one patient in five months.* We have lost an endowment for all of this of \$200,000 that would have permanently solved the hospital problem and placed it beyond deficit or taxation perpetually. . . .

"Henceforth the hospital can only be maintained by heavy taxation or hospital drives to meet yearly deficits. It might be well for *those who have destroyed the morale and heart and soul of the institution* and have desecrated it in more ways than one to find some philanthropist who will restore to the institution and the taxpayer the \$200,000 the present regime has lost for it. It can't be done. No one will endow a standardless hospital.

"I regret the entrance into our civic life of political expediency and barter of fundamental civic values. We do not need this nor do we need slanderous, libelous sheets. They are the pernicious misdirectors of civic activities and it is deplorable that so large a number of our people fall for their insincerity.

"I regret beyond all telling the bitterness that has characterized the hospital agitation. It has emanated almost exclusively from those who are opposed to the reasonable standard to insure efficiency to the sick. From the onset I have insisted that the hospital was bigger than myself or any individual or the entire local profession and my own elimination from any official connection with it, by politics, was non-consequential. The institution will stand, serving the sick in some capacity, when all of us shall be as the ashes of the Tunician dancing girl in her long-forgotten sarcophagus."

If you can drive through ten miles of mud to ease the little child of a dead beat;

If you can do a podalic version on the kitchen table of a farm-house, with husband holding legs and grandma giving chloroform;

If you can diagnose tonsillitis from diphtheria, with a laboratory forty-eight hours away;

If you can pull the three-pronged fish-hook molar of the 250-pound hired man;

If you can maintain your equilibrium when the lordly specialist sneeringly refers to the general practitioner;

If you can change tires at 4 below at 4 a. m.;

If you can hold the chap with lumbago from taking back rubs for kidney trouble from the chiropractor;

Then, my boy, you are a Country Doctor. — H. W. Davis (Journal Kansas Medical Society).

- *The* MONTH *with the* EDITOR -

Notes, reflections, extracts from correspondence, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

ALBION WALTER HEWLETT

A PERSONAL TRIBUTE

BY WILLIAM EVERETT MUSGRAVE

THE WORLD HAS LOST A GREAT PHYSICIAN AND I HAVE LOST A FRIEND AND A BELOVED DOCTOR IN THE PASSING OF WALTER HEWLETT.

HEWLETT WAS ONE OF THE TEN BROTHER PHYSICIANS WHO SO FAITHFULLY AND EFFICIENTLY ATTENDED ME DURING MY GRAVE ILLNESS OF TWO YEARS AGO. I LOVE THEM ALL, AND NOW THAT ONE OF THEM IS GONE MY SORROW IS PARTICULARLY POIGNANT AND MY UNDERSTANDING SYMPATHY ENFOLDS THOSE WHOSE LOSS IS GREATER THAN MINE.

THERE IS SOMETHING OF THE TRUE PHYSICIAN THAT ONLY THE SICK, REACHING OUT WITH FEEBLE CRAVINGS FOR HELP, EVER DISCOVER. GOOD DOCTORS SENSE THIS QUALITY IN THEIR WORTHY COLLEAGUES, BUT THEY CANNOT DESCRIBE IT. IT EXPRESSES ITSELF IN A PRACTICAL FRATERNITY OF SPIRIT AND EVEN IN SOCIAL CONTACT TO A DEGREE NOT FOUND AMONG ANY OTHER CLASS OF PEOPLE WHATSOEVER. THIS SOMETHING, NEBULOUS IN HEALTH, BECOMES AS CLEAR AS CRYSTAL THROUGH THE MORE FAR-SEEING VISION OF THE DOCTOR-PATIENT. IT IS BROTHERLY LOVE—*THE* BROTHERLY LOVE.

DESPERATE ILLNESS MAKES THE PHYSICIAN WISER. WHEN HE COMES BACK FROM LONG WALKS IN THE VALLEY OF THE SHADOWS, HIS LOVE OF GOD, HIS FAMILY, HIS PHYSICIANS AND HIS FELLOWMEN BECOMES MORE INTIMATELY A SUBSTANTIAL PART OF LIFE, AND IT COMPENSATES AMAZINGLY FOR SUFFERING.

THE DOCTOR-PATIENT, NOURISHED BY THIS EXPERIENCE, SEES BEYOND THE SURFACE INDICATIONS OF "PROFESSIONAL COURTESY" DEEP INTO THE HEART AND SOUL OF HIS ATTENDING PHYSICIANS, AND THE PICTURE IS PLEASING. IT REFLECTS WITH BRILLIANT CLEARNESS INTELLIGENT HUMILITY, THE SPIRIT OF SACRIFICE AND A SOMETHING ELSE TOO DIFFICULT FOR WORDS AND TOO SWEETLY SACRED TO DISCUSS, WERE WORDS AVAILABLE.

THIS EXPRESSES SOMETHING OF MY FEELING FOR EVERY ONE OF THE TEN OR MORE DOCTOR FRIENDS WHO CARED FOR ME DURING MY ILLNESS; AND NOW THAT ONE OF THEM HAS GONE I MOURN HIM AS A BROTHER AND WITH AN UNDERSTANDING THAT ONLY HIS OTHER PATIENTS CAN APPRECIATE.

OTHERS WILL TELL OF HEWLETT'S INFLUENCE UPON MEDICINE, HIS LEADERSHIP AS A TEACHER OF THE SCIENCE AND ART OF OUR PROFESSION, OF HIS VALUE AS A CITIZEN, BUT I SPEAK ON BEHALF OF HIS PATIENTS WHO LOVED HIM AND WHO MOURN HIS PASSING AS THE WISE, SYMPATHETIC, WHOLESOME, LOVABLE, CONFIDENT FRIEND AND HEALTH ADVISOR FOR BODY, MIND AND SPIRIT THAT EVER CHARACTERIZES THE TRUE PHYSICIAN.

HE HAS GONE TO HIS REWARD. MAY GOD KEEP HIS SOUL IN PEACE AND COMFORT HIS FAMILY AND HIS FRIENDS.

"Ich Dien" (I serve), which is the motto of the coat-of-arms of the Prince of Wales, might well be placed on a scroll surmounting the Caduceus, or Staff of Aesculapius, which is the insignia of the medical profession. The essential nature of the work of the healing profession, including not only the physician, but also the nurse, dentist, the pharmacist, etc., is *service*.—Ohio Health News.

The C. M. A. meets in Oakland April 26 to May 1, 1926, following the A. M. A. meeting in Dallas, Texas (April 19 to 23), with just the right connection to avoid wasting time. Many prominent officers of the A. M. A. and national figures from various centers who will take active part in the A. M. A. meeting have already agreed to return via California, and take an active interest in the program of our own sessions. These splendid colleagues should be properly escorted and chaperoned all the way from Dallas until they leave our territory through Nevada and Utah.

"A Malpractice Suit, with its attendant newspaper publicity, can work serious damage to your reputation, no matter how many years you may have efficiently and altruistically worked in public health endeavor."

This is only one short paragraph from a most suggestive and illuminating letter recently sent to all California Medical Association members. That letter, doctor, contains sobering facts that you ought to read, and suggestions that you should heed. Read it again.

Wise Health Boards in certain centers are maintaining distributing stations for antitoxins and vaccines in County Medical Society headquarters.

There's the germ of a big idea in such service, but it will not be seen by those health boards which are out to corral the practice of personal health.

"Anyone who is asked to check over the extensive printing and typewritten notes of a well-known institute (L. F. Donahue, Journal Med. Soc. N. J.) is aware that, aside from the legal, impressive-looking document, there is very little that has not been already known by the family doctor. It is true that his sympathy for the patient, and his knowledge of his previous psychology, has often prevented the family physician from telling him that he has a murmur which may be harmless, an old healed tubercle, or a similar inactive condition. This, the strange examiner greedily puts down. The patient naturally believes that his old family doctor was an old fogey, that only by the expert's examination was he saved from the dire consequences of a neglected lesion."

The Editor's Mail

—SEVERAL CORRESPONDENTS ARE INTERESTED and some of them so disturbed over the current controversy as to whether the proposed new University of California school or courses in nursing shall be controlled by the Department of Education or the Department of Hygiene, that they ask us to discuss the subject.

Inasmuch as part of medicine (optometry) is now being taught in the Department of *Physics*, we might suggest that nursing also be placed there. By all means let's teach our medical subjects together, and the Department of *Physics* certainly can teach nursing quite as well as it can diseases of the eye.

Physicians wonder what are the future plans for the medical school, hospitals, and Hooper Foundation in San Francisco. It looks to those outside as if what of medicine certain influences cannot transfer to the Berkeley campus they intend to destroy—all of which reminds one of this limerick:

*"There was a young lady whose dream
Was to feed a black cat on whipped cream;
But the first cat she found
Spilled the cream on the ground,
So she fed a whipped cat on black cream."*

—A Los Angeles member offers the following criticisms of CALIFORNIA AND WESTERN MEDICINE:

"First. I believe that it is absolutely essential that every article that is supposedly original or is listed as original should have a bibliography, so that one can look

up the authority quoted. When this is not done it causes men to write poorly—they do not look up the literature on the subject; and this, as a rule, results in a rehash of articles that have been published many times before.

"Second. Original articles received by the editor should be re-read and criticized by men interested in the particular branch of medicine, to determine whether or not they are real contributions to the literature, having in mind one article that was published in the last Journal by one of our local colleagues, in which I find that many questionable references are made, as well as opinions that have been disproven in recent literature."

Comment—The first of these criticisms has been anticipated and answered many times in CALIFORNIA AND WESTERN MEDICINE, and our present custom was approved officially by the Council of the California Medical Association. In any event, the doctor does not criticize the editor nearly as much as he does the authors, and he takes a responsibility we would not take, and do not believe to be true, when he says that the lack of publication of bibliographies "causes men to write poorly . . . and produce a rehash of articles that have been published many times before."

The suggestion made in the second criticism has been a constant practice of CALIFORNIA AND WESTERN MEDICINE for so long that we thought everybody knew about it. The article apparently complained about was read and endorsed by more than one specialist in the field covered by the article, acting as confidential editorial councilors. One of these editorial councilors was a close and particular friend of the man who makes this criticism.—EDITOR.

—W. W. Cross, M. D., Oakland—You probably have learned that I have moved from Fresno, which will make it necessary for me to change the card which I have in the Journal. As I intend to devote my entire time to genito-urinary work, I should like for the card to state that. The form as enclosed is what I desire to appear in the Journal.

—Luther M. Boyers, Berkeley, sends us letters and some amazing literature from the William Bannerman Company of Chicago. They claim that one or a few injections of their solution will cure varicose veins, and that it is an effective remedy for a long list of other ills.

The letters and "literature" have been forwarded to the Bureau of Investigation of the American Medical Association.

A. Gottlieb, Los Angeles, closes a letter upon other matters by saying: "I wish again to congratulate you upon the wonderful and continually growing success of CALIFORNIA AND WESTERN MEDICINE."

—I am enclosing a paper with illustrations and x-ray plates for your use in CALIFORNIA AND WESTERN MEDICINE. If you do not feel that this is a suitable subject for our magazine, I should appreciate the return of the copy and photographs.

I shall appreciate your editorial comments on the construction of the paper, as you have helped me in the past and I know the value of your opinion.—A. J. S., Los Angeles.

—I am returning the corrected manuscript. Your corrections certainly materially improve the paper. I thank you.—P. O. S., Los Angeles.

PUBLIC OPINION or something else has influenced the Ford Hospital in Detroit to materially change its financial methods.

If reports regarding the change are true, the Fords have jumped from the frying-pan into the fire, and when properly scorched in the new position they may be expected to jump again.

Rub—Did you see much poverty in Europe?

Dub—Yes, and I brought some of it back with me.—Life.

THERE ARE NINETEEN STATES and territories that do not accept the National Board of Medical Examiners.

California is one of them, and it is in poor company.

Hobbs—I really believe you have stopped your worrying. What brought about the change?

Dobbs (cheerfully)—My troubles are more real than they used to be.—Boston Transcript.

California, Nevada, and Utah Doctors Publish Elsewhere:

[Note—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.]

—Wallace Irving Terry, San Francisco (Journal Iowa Medical Society), writes on "Goiter."

—John V. Barrow, Los Angeles (Journal Iowa Medical Society), writes an article on "Intestinal Protozoa and Chronic Diseases, With Especial Reference to Chronic Arthritis."

—F. M. Pottenger, Monrovia (Better Health, November), tells of "The Role of the Preventorium in the Tuberculosis Program." "If tuberculosis," says Pottenger, "as we find it among children, were given the attention that it deserves in this generation, the amount of clinical tuberculosis among the adult population of the next generation would be greatly reduced."

—L. M. Boyers, C. A. Kofoid and Olive Swezy, Berkeley, California, write on "Chronic Human Amebiasis: Diagnosis and Treatment on Basis of Encystment in the Liver Area," in the Journal of the American Medical Association, November 7, 1925.

—Adolph A. Kutzmann, Los Angeles (Better Health, November), tells a timely story about "Backache and Kidney Pills."

—John W. Shuman, Los Angeles, and William C. Allison, Los Angeles—"Hypernephroma of Bone—Case Report" (Medical World, August, 1925).

—William Manwaring, Stanford University (Better Health, November), continues his series of entertaining and informative dialogues—"A Physician's Conversations With His Son."

—Miley B. Wesson, San Francisco (Northwest Medicine, February, 1925)—"Diseases of the Prostate and Their Treatment." The author believes that:

"All males who have never reveled in 'petting parties,' been guilty of excessive masturbation, or suffered from gonorrhea will probably avoid the discomforts and dangers of chronic prostatitis. This ailment can be cured, but the treatment takes years. . . . In fact, all diseases of the prostate are curable if they are diagnosed promptly, but there is no excuse for medicinally treating a surgical prostate until the patient is beyond the curative stage."

—In another article (Journal of Urology, June, 1925), Wesson writes on "Cysts of the Prostate and Urethra," a monographic report with bibliography.

—Randolph G. Flood, San Francisco (American Journal Dis. Children), writes of the "Acid Effect of Hydrochloric Acid and Lactic Acid Milk." He concludes that:

"1. Hydrochloric acid milk exerts a marked diuretic action not shared by lactic acid formulas.

"2. The total acidity of the urine, which is the measure of the acid effect produced by any ingested acid, is markedly increased by hydrochloric acid, but is little changed by lactic acid milk.

"3. The reason that lactic acid has little effect on the total acidity of the urine is probably because it is completely oxidized in the blood stream, and, therefore, has little effect on the acid base balance of the blood plasma."

—LeRoy Brooks, San Francisco (Better Health, November), discourses in popular language on "The Other Fellow's Blood—Its Uses."

—P. J. Hanzlik and M. L. Tainter, San Francisco (Archives of Internal Medicine, October 15, 1925) write on "Blood and Symptomatic Changes Following the Intra-

venous Administration of a Variety of Agents and Solutions."

—Zach B. Coblentz, Santa Maria (Journal A. M. A., October 10, 1925), discusses "Cysticercus of Skin."

—William J. Kerr, G. D. Delprat, N. N. Epstein, and Max Dunievitz (Journal A. M. A.) discuss the rose bengal test for liver function. Former papers by the authors are followed up, and they believe that "further observations confirm our earlier opinions of the value of rose bengal as a test for liver permeability and gross function."

—W. E. Musgrave, California (Better Health, November), under the title of "I Am a Doctor," replies to the vicious attack upon physicians by William Johnston published in Collier's of September 5.

SOME OF OUR NEWSPAPERS are again selling display space to that nostrum—"Lydia E. Pinkham's Vegetable Compound." Samuel Hopkins Adams exposed this "female weakness remedy" nearly twenty years ago. He showed that the Pinkham woman died in 1883, but that alluring advertisements still invited credulous, stupid women to write to Mrs. Pinkham. As far back as 1918 the government pronounced this cure-all *misbranded*, in that its promoters "falsely and fraudulently" claimed it to be an "effective remedy" for "falling of the womb, leucorrhea, etc." when in "truth and in fact" says the notice of judgment, "it was not." The remedy also contained 19+ per cent of alcohol.

The revived up-to-date advertisements are more subtle in their language, but how newspapers can harmonize their *own ethics* with the facts in the case is best not explained.

ANCIENT PHILOSOPHY that is still modern finds itself provocatively illustrated by:

Inquiring Visitor—To what do you attribute your long life, uncle?

Oldest Inhabitant—Well, I don't rightly know. Several of them patent medicine companies is bargaining with me now.—Princeton Tiger.

With Other Medical Editors:

—JUST WHAT DOES BIRTH CONTROL MEAN? Does it include the use of preventive measures to conception? Does it include continence? Does it include abortion? Does it include Spartan infanticide? Does it include pre-adolescent or post-adolescent sterilization? Then, too, whose birth is to be controlled? Only the defectives, the criminals and the diseased, or may it not become fashionable for Jones to have his wife sterilized before or after marriage, or Mrs. Smith her husband.

And who is to control the controllers? The governor, the legislature, the doctor, the lawyer, the butcher, the baker, the unmarried or the married, or a conglomerate board of these elements?—Virginia Medical Monthly.

—NEVER IN THE HISTORY OF THE WORLD has there been so much propaganda adroitly and skillfully spread among the people as is found today. The fate of nations, institutions, people, politics, religion, theories, and objects of commercial gain, each is linked up with propaganda spread by articles in the lay press, by lectures from the Chatauqua platform, sermons in our churches and speeches before various organizations, and last but not least, the talks over radio. Just at the present time the American people are being treated to a series of newspaper articles on health problems, presumably under the authorship of medical men, that are spreading propaganda which in no sense has the endorsement of reputable and ethical medical societies, or medical men as individuals.—Journal Indiana Medical Association.

—THIS LAND OF OURS has ever been tolerant and even overzealous in seeing that the vociferous and loud-spoken should have all the air and opportunity necessary to relieve their overburdened chests. . . .

One lurid pamphlet quotes with great gusto opinions of men so eminent that one had a title of M. A., D. C. L.,

M. R. C. S., and L. R. C. P. A man with so distinguished a title doesn't need meat—he doesn't need anything except the great outdoors where men are men.—New York State Journal of Medicine.

—The Medical Society of the State of New York has many kinds of service to offer to its members. It is organized on the mutual plan. Its members govern the society and share in its profits. The society is what the members make it, and its profits depend on the amount of investment which the members put into it, and how well they manage it.—New York State Journal of Medicine.

—There is a real danger in anti-scientific legislation, for Truth seems always hidden by the blind spot in man's eye. An example has been set for the passage of antivivisection laws; irregular practitioners are gaining their point in many states, and it is becoming increasingly difficult to retain compulsory vaccination, even where it is still practiced. *For every one to kindle a light there are ten to extinguish it. It disturbs their sleep.*—Boston Medical and Surgical Journal.

—Chapin, in calling attention to Goethe's remark that blood was a very peculiar juice, added that the same could be said of milk.

It constitutes the food of the young of all mammalia, but when it is produced for commercial purposes it has long been recognized as being the most useful food and also the most dangerous. At times milk has been known to have been the cause of epidemics of many types of disease, and during certain of these the question actually arose as to whether its dangers did not outweigh its value as a food.—International Medical Digest.

—MARYLAND's so-called "Six Months' Law" attracted wide attention when it was passed in 1916. The law forbids separation of mother and babe for the first six months of the infant's life. Before the passage of the law, one illegitimate child in four died during the first six months. The rate has now been reduced to one in twelve, which is one and one-half times higher than the death rate in legitimate children.—Colorado Medicine.

—THERE ARE EVEN HEALTH AGENCIES that frequently inaugurate campaigns to "educate the doctors" to the need and value of periodic health examinations.

Acutely aware of these "beneficent and magnanimous efforts" in their behalf, the physicians travel on—keeping abreast of the developments in scientific medicine, taking part in their County Society and State Association activities, giving their patients the very best of the skill and knowledge, and doing everything within their power to make the community in which they live, a better, safer, healthier, and happier place for their neighbors.—Ohio Medical Journal.

—The white man is not adapted for permanent residence in a tropical climate; neither, it seems, is he by reason of his general physical and mental "make-up" intended for many of the artificial conditions under which he now lives, including the heated atmosphere of most interiors in the wintertime. Too much luxury, perhaps (overheated air may be regarded as a luxury), tends to deteriorate physically and mentally.—Medical Journal and Record.

—Another new A. M. A. publication, "Archives of Pathology and Laboratory Medicine" (Journal A. M. A.), will shortly make its appearance monthly. The editorial board includes William Ophüls as the Western representative. This new venture will cover a most important field of medicine, and we bespeak its support by our members. We are delighted that the trustees have honored a California physician on their editorial board.

—ONE NEED NOT MARVEL at the credulity the people manifest in regard to all kinds of fake remedies and mystery methods of healing. Most of us were raised that way.—Journal Kansas Medical Society.

—Getting Out the Journal

Getting out a bulletin is no picnic.

If we print jokes, people say that we are silly.

If we don't print them, they say we are too serious.

If we print original matter, they say we lack variety.

If we publish things from other papers, we are too lazy to write.

If we stay on the job, we ought to be out hustling news.

If we are hustling news, we are not attending to business in our own department.

If we don't print all contributions, we don't show the proper appreciation.

If we do print all contributions, the paper is filled with junk.

Like as not someone will say we swiped this from an exchange. So we did.

We got it from the Illinois Medical Journal.

Many of our Disabled Veterans are making a living as are other citizens. Those of them, and they are numerous, who are doctors, buy from their "buddies" engaged in business. They also are trying to make a living selling the same sort of service they rendered during the war. The veteran who sells automobiles or groceries would feel discriminated against if the government became his competitor, precisely as they are urging the government to compete with those veterans who practice medicine for a living.

We all want to see every veteran have all the skillful medical care he needs for himself and those dependent upon him. We all, also, want him to have this service free when need be. BUT there are thousands of the best doctors we have—themselves veterans—who are willing and glad to serve their ambulatory sick fellow-veterans as individuals for nothing, or what the patients feel they can afford to pay. When the government goes into the "diagnostic clinic" business, it is discriminating in a useless manner between those who served.

"The Michigan State Medical Association has taken the following stand:

1. The group or associated body of physicians is amenable to the same regulations and principles as is the individual physician.

2. The fact that two or more physicians have formed a partnership, group, or clinic, does not grant them special publicity privilege.

3. The creation of a group or clinic does not convey unusual publicity privileges, even though part of their activities may be of a charitable type."

ONE OF OUR ESSAYISTS has complained to this editor that his use of the noun "pathology" to indicate a pathologic condition was allowed to get by the editorial blue pencil. Our defense is, that the abuse of this word in statements, such as "there was no pathology in the appendix," has become such an extensive habit—reprehensible habit—that our editorial staff must be excused for overlooking a mistake that they have to correct so often.

Never Again

"Ruth, dear, won't you offer little Archie part of your apple?"

"No. Eve did that and she's been criticized for it ever since."

"James Compton, Secretary California State Board of Chiropractic Examiners, recently announced that in the last few months the board had licensed 1542 chiropractors."

What About California?—"According to E. S. Elwood, managing director National Board of Medical Examiners, candidates holding the certificate of the board will be granted a license to practice medicine without further examination in South Dakota. *This makes a total of about thirty-three states, besides Porto Rico and the Canal Zone, which accept the board's certificate.*"

According to the Public Press:

—Newspaper editors are getting quite a lot of fun out of Doctor Copeland's proposal to establish "restaurants at which patrons will be able to get just the sort of food they need for whatever may be the matter with them."

The New York Times, for instance, considers this an "alluring prospect," but the editor wants to know if the "waiters are to be diagnosticians, or shall each restaurant have its own staff of expert diagnosticians." "Perhaps," continues the Times, "the Senator himself will be on duty an hour or so a day. His newspaper articles long since demonstrated that he knows all there is to know about every mortal ill and just what should be done for each of them."

All of which is but another of the numerous reasons why health-promoting publicity for the public press should be impersonal and given out in the name of a recognized medical organization rather than that of an individual. The Better Health Service is the best example of how to do this.

—More than 25,000 mental disease patients of the 250 million dollars' worth of state hospitals of the United States are out on parole. A regular avalanche of protest against this is widespread.

And who would not be nervous among politicians who traffic thus with the public health?

—The expert statisticians have again lengthened the life span several years since this editor was last in the city. It seems that a fellow must go to town every day to get the "latest" about long life. If he stays in the country for weeks at a time his "hickness" is liable to shine most prominently in his lack of information about the last decade that has been added to life.

What we would like to know is, what is to be done with all the centenarians. The "homes," asylums, and hospitals are now full to overflowing, and goat glands are said to be running short. At least they are selling for higher prices.

—A nurse attending a scarlet fever patient broke quarantine and went to a barber shop to have her hair bobbed.

Only physicians and nurses can fully appreciate the potential dangers in such a—to be generous—stupid action.

—Arbuthnot Lane is at it again. He resembles some other tourists who make brief visits to foreign countries and leave a trail of press clippings behind them that would make a less egocentric guest blush for shame. Our organizations of doctors should exercise greater care than they sometimes do in selecting foreign physicians to be our guests.

—Cucumbers are coming into their own again. This latest fad to "purify the system" and weigh just one hundred pounds is off to a fast start. It is sponsored by fashion dictators and cooks, and when these combine their influence they get results—with fools.

Doctors will benefit, but what a ghastly business to have to lose sleep to cure fools with the bellyache.

—Another free-for-all personal health clinic for children has been opened in San Francisco. Proponents of municipal operation of public utilities about which we are hearing so much might get valuable lessons from our rapidly extending "municipal operation" and direction of personal health.

—"Looking-glass education" is the latest addition to the public school curriculum for "flapper grade" girls. This is humorous or pathetic, depending upon the point of view. But when such arrant nonsense is credited (?) to "health education," as it is, uglier characterizations are indicated.

—Two more of our good doctors are defendants in a \$100,000 malpractice suit. In this instance they are accused of putting a plaster cast on a woman's leg so tight that circulation was interfered with, making subsequent amputation of one leg necessary.

Moral: Well, you know what it is.

—Secretary Hoover, in a recent talk to the Associated Advertising Clubs of the World, told them that the milestone which marks the passage from a trade to a profession is the establishment of group ethics. He pointed out that in the law, medicine, engineering, it is not only training and skill which is required, it is the elevated code of relations with fellowmen, the incorporation of responsibility to the community into the daily task, the insistence upon a high sense of service given, that marks their distinction.—Ida M. Tarbell (McClure's).

—"The daily motion picture audiences of America include nearly a million children—a juvenile throng that would fill to overflowing two thousand average movie theaters.—McClure's.

—A professor at one of our universities insists that the brain does not tire.

"The brain-weary businessman is a fetish of the popular imagination," claims Professor Miles. "He may be bodily weary, but brain-weary never. If our bodies could stand it, our brains could function twenty-four hours a day, and be as bright in the twenty-fourth hour as they were in the first."

One of our readers in calling our attention to this statement adds the note that the "hoe doesn't get tired, but the gardener does."

—In 1922 the California Medical Association adopted a resolution whereby the office of every member became a health center, to render services for a fee commensurate with the ability of the applicants to pay. That the plan is sound, Dr. Schmitt says, is demonstrated by the fact that one-third of the persons applying to the Health Center of the University of California have been referred to private physicians.—University of California Clip Sheet.

—Doctor Copeland (Collier's) tells the world that "The doctor of the future will be a practitioner of preventive rather than corrective medicine." He develops this theme in the usual manner. We would like Doctor Copeland to tell us, when his dreams come true, who is going to care for the 3,500,000 people who are sick every day—and know it. Then there are from 60 to 75 per cent of the other 110,000,000 who are not well, but they are still able to make the grade.

It's all right, of course, to preach prevention, but some millions of us who have been through the mill, and realize that we must go again, are more concerned to have competent doctors to advise and assist us with that skillful, sympathetic service that most of them so effectively employ than we are with the practitioner who will tell us how to avoid something else.

—The effects of "emotional sprees," or "nervous jags," on the health are almost, if not equally, as bad as the results of an alcoholic spree.

A lot of people who get drunk regularly are sick, and practically all of the people who indulge in emotional sprees are sick—mentally sick, nervously disordered. They are victims of deficient self-control.—W. S. Sadler (American Magazine).

—SOME DOCTORS did so much unrestrained talking about poor old Doctor Blazer's unfortunate family matters that the newspapers quite noticeably twisted the crime of one man into another arraignment of a great profession.

We would much prefer to be in Doctor Blazer's fix to that of some healthier doctors, if they mean what the papers quote them as saying. When talking for publication, it is well to remember these lines from Omar Khayyam:

The moving finger writes; and having writ
Moves on: Nor all thy piety nor wit shall lure
It back to cancel half a line, nor all thy tears
Wash out a word of it.

—We do wish the American College of Surgeons would engage a wise publicity director. Every time these estimable surgeons hold a meeting the press-clipping agencies deliver a mess of mud-slinging that has besmeared all the other members of a great humanitarian profession. The recent Philadelphia meeting was no exception, and too much dirty linen was washed in public. Of course, all destructive criticism of doctors or undue claims

by doctors are "news." The more sensational they are, the greater the "news value."

We do not for a moment believe the American College of Surgeons endorses or connives at much of the publicity that accompanies their meetings, and some of it is unavoidable. But much of it would be avoided by a good publicity director, and the reputations of physicians, some 145,000 of whom are not members of the "college," would be cleaner than they are with the obviously ineffective methods now in vogue.

—A noted biologist and "leading authority," say displayed news dispatches, implanted the glands of young untrained rats in the bodies of old, educated rodents. The veterans, while rejuvenated physically, lost their memory, even forgetting the location of their home cages.

Goodness gracious, we thought that was what "old rats" got "rejuvenated" for. Doctors have assumed right along that if rejuvenation restored a failing sexual power, it would at the same time "rejuvenate" the desire to find mates often away from the home cage. A sort of amnesia, as it were!

—A professor gets display space in some newspapers by announcing the "discovery" (?) that light travels in waves of different lengths.

Too bad we abolished the old-fashioned school books, isn't it?

—An Arizona doctor claims that "graded doses of sunlight will cure all the ills of humanity."

This obtained prominence because the doctor also said that "California is the most ideal place in the world for the new sunlight treatment."

Some thousands of years ago the Athenians made a similar claim for their sunlight. Then came the sun worshippers—but why spoil the story?

—Two "noted French pathologists" have "discovered" a substance with which, by the simple process of a hypodermic injection, people's weight may be changed to meet the changing styles in clothing or otherwise.

That was cabled "news" on the same day of the announcement that Paris "dressmakers" had decreed 100 pounds as the "society weight" for this season.

Now that's "team work"!

A United Press story published by some of the less particular newspapers announces another revival—as something "new"—of the story that lead will cure cancer. As usual a "noted" physician—a foreign one—is credited with the "discovery."

It was a great day for cancer cure fakers when newspapers stopped selling them advertising space. They just became a little smarter and now get their stuff into the news columns—of some papers—for nothing.

Disgusting, yes. Criminal, often; but there is encouragement in noting from press clippings that fewer newspapers now publish such stuff.

—Representatives of competing press services in England must be very gullible or conscienceless to cable new "cancer cures" to our papers so frequently.

One day recently the front page of some newspapers contained reports of the discovery of another cancer cure by a "noted British doctor," and another story of the discovery also by a "noted doctor and manipulative specialist"—probably a chiropractor—of some sort of a gland that is responsible for women changing their minds so frequently and arbitrarily."

OVER ONE HUNDRED MILLION PEOPLE in the United States escaped death or injury last year by twenty-five million automobiles.

That's far more than escape similar consequences from tuberculosis, syphilis or gonorrhea germs. Effective "safety-first" methods are easier to apply to germ traffic than they are to motor traffic. A modicum of applied intelligence is all that is necessary in either case. In proportion as we succeed in either case, is our intelligence.

IF NEWSPAPER ARTICLES about some of them are significant, the plastic surgery surgeons or "beauty surgeons," as they are being dubbed by popular writers, are liable

to be the next group that will want medical ethics modified to meet their "peculiar conditions."

Plastic surgery, as a fine and legitimate medical specialty, is quite definitely drifting into treacherous waters through the amazingly stupid conduct of some doctors who know better and who should be ashamed of their conduct.

It is generally recognized by the more progressive health authorities that house fumigation, as heretofore practiced, is of almost no value in the prevention of the spread of disease.—Journal A. M. A.

"THE MOST COMPETENT AUTHORITIES believe that the only completely effective method of determining diseases and defects in the eyes of school children is through an examination by an ophthalmologist."

And yet most of the extensive report of the National Committee for the Prevention of Blindness, from which this was taken, is devoted to telling teachers how to do it.

"A 'HEALTH DEFECT' is a condition actually or potentially detrimental to a child's health or efficiency; the type that should be recognized and corrected if remediable."

If this is not profound enough to please, read this. Both are from a report of The National Committee for the Prevention of Blindness.

"Borderline" is a term used to refer to the line which separates the normal condition from the health defect, anything of less degree than the border line being included with the normal, and a defect of worse degree than the border line being considered a health defect."

Then this caution to the various groups of laymen who are replacing doctors in the care of the health of school children:

"Examinations of the visions of school children should be made in conjunction with general physical examinations in order that when a defect of visual acuity is found it may be compared with the child's general physical condition to determine to what extent the two are related in the case in question. General health and physical vigor are important factors in determining the degree of visual acuity possessed by children of school age."

We are delighted to receive so many messages commending the idea of devoting space to "Bedside Medicine for Bedside Doctors" and the substitution of this title for what was initiated as "Medical and Surgical Conversaciones." It is heartening to an editor to so often see refuted the alleged statement that doctors do not write letters.

THE BEST SUNDAY SUPPLEMENT we have seen in any newspaper was the BETTER HEALTH supplement issued by the San Francisco Examiner on October 25.

This eight-page enclosure consisted of sound health information for non-medical people. It was all prepared, as is the matter in the daily and regular Sunday Better Health Services, by educated physicians. Yet no doctor's name appeared in the supplement.

This is as it should be. The BETTER HEALTH Newspaper Services promote a cause, and not individual doctors.

San Diego's Medical Lectures—Dr. Henry Sewall, Professor of Medicine at Denver, will give a course of six lectures in San Diego, beginning January 4. His subject will be "Physiology." The lectures cover modern research in the metabolism of respiration and of the endocrines.

The lecture course is given by the San Diego Medical Lectureship Fund, raised among members of the County Medical Society, chiefly through the efforts of Dr. David Higbee.

THE TWO PRIZES offered by the C. M. A. are worth working for. The financial reward is not so great, but there are other compensations for the winner of a contest promoted by a great medical organization that will be of value to the successful author all of his life.

More complete information about these prizes may be found elsewhere in this issue.

W. C. Hassler, Official Public Health Doctor of San Francisco, tells the press that 8921 babies were born in the city last year, and 450 of them died before they were a year old.

If the some 200,000 women of child-bearing age only produce some 9000 babies a year, it's about time to soft-pedal the birth control publicity until we get back again to a "quantity production" basis.

Of course, it's fine to tell mothers again for the nth time monthly how to save babies when they get them, but goodness, let's also increase production.

What we would like to know is, where, how, from whom, did those university "students" learn that "the family is unnecessary to the progress of civilization"?

The answer to that question would apply to many others that are being asked—and it might prove illuminating enough to decrease taxes.

The Supreme Court of Appeals of West Virginia rules that this was an action for damages from an alleged injury from negligent and unskilful treatment by one of the defendant's nurses while the plaintiff was a paying patient at the defendant's hospital. The defendant filed a special plea, setting forth its character as a charitable institution. An objection to the plea was sustained and the plea rejected. The case was then certified to this court on the joint application of both parties to the suit, who desired a ruling on the sufficiency of the plea. The exact question involved had never been determined by this court. Public policy demands that charitable institutions be fostered and preserved. To this end, the law should deal with them more leniently than with institutions conducted solely for private gain. No human endeavor of any magnitude is immune from mistakes. No matter how strict a rule might be enforced against institutions of this nature, mistakes in treatment would occasionally happen. Employes and servants selected with ordinary care, however, will execute the charity with but few mistakes. If no care be had in their selection, mistakes will necessarily multiply. The purpose of the founders of a charity is to help those who need assistance. They propose, not unskilful or incompetent aid, but humane and efficient treatment. The subject of an employe's negligence is harmed instead of helped by the charity. The will of the donors is thwarted instead of served when an object of their beneficence suffers from such neglect. When administered by incompetent servants, charity, instead of being a great boon to humanity, may become a menace. One who enters a hospital expects, and has a right to expect, more skilful treatment than is obtainable in the home. If such institutions be not held to reasonable care in the selection of their employes, confidence in their efficacy will be shaken. Many who need, will fear to accept hospital treatment, and those who do apply therefor will lack the faith therein that is so frequently half the battle in the contest with disease. In order that the high purpose of the donors of a charitable hospital may be best served, that those who need aid may not hesitate to accept the charity, and to prevent as far as may be human suffering from acts of negligence and incompetence, it would seem imperative to require of those in charge reasonable care in the selection and retention of the employes. The fact that one is a paying patient does not alter the rule. Such patient is the recipient of the donors' gratuity only in a lesser degree than one who makes no payment. The hospital building, with its equipment, management, and its great possibilities for the alleviation of suffering, was provided by charity. In using the organization made possible and supported by that charity, a paying patient, to that extent, benefits by the charity. Because of its failure to allege that the defendant used reasonable care in selecting the nurse of whose negligence the plaintiff complained, this court holds that the plea as presented did not in terms state a defense to the action, and the judgment of the lower court is, therefore, affirmed. As stated in the syllabus of the court, it is incumbent on a charitable hospital to use reasonable care in the selection and retention of its physicians, nurses and attendants; and for failure to do so it is liable for injuries due to their incompetence received by its patients.—Journal A. M. A.

Medical Economics and Public Health

"From no other state during the past six or seven years," says the Journal of the A. M. A. in discussing the activities of the California Board of Medical Examiners, "have so many reports been received regarding the prosecution of illegal practitioners and the revocation of the licenses of physicians found guilty of criminal or illegal practice. In few states have such careful records been kept of those engaged in the various branches of the healing art."

"Recently, members of the diploma mills were dismissed on motion of the prosecution, because the authorities of San Francisco failed to provide sufficient funds to prosecute the cases."

Have You Registered Your Certificate?—Reports are coming to us of instances where doctors are running afoul of the law because they have failed to register their certificates to practice medicine and surgery with the county clerk of the county or counties in which they are practicing. This registration of the certificate with the county clerk is just as much a part of the law regulating the practice of medicine as is any of its other features. This oversight may be an extremely expensive one to a physician at the most inauspicious moment.

"If you do not think," says the Journal Indiana Medical Association, "that state medicine is a threatening evil, read some of the papers published in certain medical journals with a leaning toward welfare organizations, and listen to some of the talk of salaried public health officers and all-time professors in our medical schools."

Monkeying With the Narcotic Law—Too many of our good doctors are finding to their cost that the new narcotic law of California now in effect has vicious teeth in it. It is no longer possible to violate this law and smooth the matter over, because the law itself recognizes nothing less than penitentiary sentences. No judges or other people have authority to waive this mandatory provision of the law.

There may be grounds for debate upon the wisdom of enforcement officers in using under-cover agents posing as addicts to get a doctor into trouble by playing upon his well-known sympathies. The doctor who allows his sympathies to lead him into an infraction of the law as it now stands is inviting very serious trouble for himself and those dependent upon him. The law provides a method by which an honest physician can relieve suffering in an addict, and any doctor who makes the mistake of not obeying that provision of the law is unbelievably stupid.

"Just how broadly the courts will construe the California Chiropractic Act is not clear. By implication, the chiropractors of California may all use any drug or medicine except such as are 'included in materia medica,' whatever that may mean. The interpretation of the phrases, 'as taught in chiropractic schools or colleges' and 'as taught and practiced by the recognized schools and colleges of chiropractic,' is difficult. Probably the chiropractic proponents of these laws had in mind the possibility of extending the field of their activities from time to time through the simple expedient of inducing their colleges to enlarge their curriculums."—Federation Bulletin.

The National Committee for the Prevention of Blindness, makes these significant statements: "'Diagnosis' and 'treatment' are terms which may be considered synonymous with 'detection' and 'correction.'"

"That the schools should make every effort to discover cases of defective vision among pupils, is agreed generally; whether the schools are to be required to correct such defects is not yet decided.

"The greater the skill and training of the examiner, the more accurate will be the opinion given. Neverthe-

less, since cases of apparently defective vision and suspected eye disease are usually treated by skilled practitioners and not the examiner, the use of teachers and other non-medical examiners is justifiable as the most practical means for examining now available."

A movement is well under way in New York to establish and endow a national home for "aged, decrepit and indigent physicians." An appeal for funds is being made by a group of professional fund raisers to doctors of the whole country, and medical editors are asked to lend their assistance with publicity. The movement is a splendid one and is being promoted by a group of well-known New York physicians. But we fail to see anything national about it, nor, in our opinion, should charity for this purpose be maintained upon a national basis. At widest it is—or should be—a state affair. The doctors of any state can, and no doubt would under capable leadership, contribute and otherwise support a service for those who have served well the people of their own state. We strongly suspect that Western or Southern doctors, for example, would have to be very old and very badly off indeed before they would be willing to spend their last days in a "home" in New York, however comfortable and attractive it might be made.

Just the same, the publicity about the New York home will do good and may lead to an adoption of the idea in other communities.

Reports from 294 cities of over 10,000 population showed that eye inspections are now conducted by the following persons:

- In 58 cities, by school physicians alone.
- In 75 cities, by nurses alone.
- In 59 cities, by physicians and nurses in co-operation.
- In 42 cities, by classroom teachers alone.
- In 60 cities, by combinations of the three.
- In about 20 per cent of the cities, physicians alone examine the eyes.
- In 37 per cent of the cities, teachers and nurses make the examinations.
- In the other cities, examinations are made by any of the three.—From the Report of the National Committee for the Prevention of Blindness.

The toll of human life taken by automobiles last year in the United States was at the rate of more than two persons for every hour of the day, or fifty-five persons for every day of the year.—National Safety Council.

Kolb & DuMez (Therapeutic Gazette) estimate that in 1924 there were perhaps 150,000 addicts of morphine, cocaine, or heroin in the United States, but they further express the belief that the correct figures should be about 110,000.

"The legislation which has been passed," believes the Therapeutic Gazette, "to limit the ability of addicts to obtain these drugs has, heretofore, been passed for the benefit of a relatively small number of degenerates and has caused an immense amount of suffering among many thousands of worthy people who, not being cursed with an impaired morale as a result of inheritance, are deserving of consideration when such laws go into effect."

In some cities, as in Cleveland, Philadelphia, Boston, and Denver, the entire health supervision of the school children is under the Board of Education. In others, as in New York, Chicago, and Detroit, the Board of Health has charge of the medical inspection, working in co-operation with the school staff.—National Committee for the Prevention of Blindness.

During the calendar year 1922, the last for which data are available, there were 78,070 persons cared for in almshouses and 348,928 in homes, day nurseries, and similar institutions. In addition to these, there were in hospitals and other institutions for the care of the insane and feeble-minded and epileptics a total of 348,174 persons. Records show that more than 400,000 persons go out from our state and federal penitentiaries annually; many of those of our dependent classes, as well as many

of those in penal institutions, are suffering from preventable diseases which, in some measure, are factors in their dependency or delinquency.—United States Public Health Service.

American Protective League, another high-sounding title for an apparently new organization of the Bernarr McFadden publications, exponents of sciosophy and enemies of scientific progress. The list of these publications include:

True Stories, Physical Culture, Fiction Lovers, True Romances, True Detectives, Radio Stories, Muscle Builder, Dream World, Dance Lovers, Modern Marriage, Your Car, Movie Weekly, and The New York Evening Graphic.

Warning—A person alleging to be a representative of a life insurance company is working doctors by the hoary method of getting them to cash a check larger than the amount needed to pay for examinations for life insurance policies. He left quite a string of worthless checks in Vallejo, and no doubt by this time is using another name and the name of another insurance company than the one he used there. We have been asked to broadcast this information, which we do, but the necessity for broadcasting a warning against such ancient methods of graft should long since have become unnecessary.

A Doctor of Santa Monica sends an inquiry to the Board of Medical Examiners with a copy of a newspaper advertisement in which an optometrist uses the title "Doctor." Doctor Pinkham of the Board of Medical Examiners replies as follows:

"In response to your inquiry as to whether W. A. Lady, 213 Santa Monica Boulevard, optometrist (whose newspaper advertisement you forwarded to us), has a right to use the prefix 'Dr.' will state that optometrists are under the Board of Optometry and *we have no jurisdiction*.

"In the San Francisco Examiner of July 25, 1925, appeared an article stating that Attorney-General U. S. Webb had advised the State Board of Optometry to the effect that California optometrists cannot legally style themselves as 'Doctors' or 'Drs.' in prefixes, and can only add the affixes of 'Opt. D.' or 'O. D.' when they are graduates of an accredited school of optometry; also that no California optometrist may hold out to his prospective patients that he possesses 'special knowledge' of optometry as defined in the Act, *which Act* defines optometry as a mechanical and not a medical science. We believe this opinion of the Attorney-General will answer your question."

"The smallpox prevalent in American and Canadian cities during the first six months of 1925 was nearly four times as deadly as the type of the disease which occurred in 1923! This year there were recorded 3.5 deaths for each 100 smallpox cases; in 1923, this figure was less than one death per 100 cases.

"The smallpox menace is real; the experience this year shows that the disease is present all over the United States in a death-dealing form. A considerable proportion of unvaccinated persons, and especially of children, in the population of any city is simply tinder for an epidemic which may cause hundreds of deaths, prolonged disability, the complete paralysis of industry and commerce and the impairment of the reputation of the city. How much longer will the American population tolerate a loathsome disease which is entirely avoidable and which has, year after year, increased its power to kill?

"What of the future? Only thoroughgoing vaccination will protect the American and Canadian populations from an epidemic of deadly smallpox which, under present indications of indifference to vaccination, bids fair to rival the most destructive smallpox epidemics in public history. The choice between complete security from smallpox and a record which may well prove to be an indictment of our intelligence rests wholly with the people of the United States and Canada."

These statements are not from medical sources, but from the statisticians and business men of a great insurance company.

Last year I was supplied with a copy of The Christian Science Monitor containing a marked editorial which started out by speaking of "Edward Jenner, who conceived the delusion of vaccination and forced it on a world which is growing daily more skeptical of the worth of his discovery. . . ." It is amazing that anyone should speak of vaccination in that way. The so-called "delusion of vaccination" has, without question, saved the lives of tens of millions of human beings since the days of Edward Jenner, human beings who would otherwise have died of smallpox. I cannot doubt, further, that it has saved many other millions of human beings from serious illness due to that malady.—President W. W. Campbell, U. C., Better Health, November.

The United States Public Service announces that recently a large number of inquiries have been received for information concerning the so-called "National Health Service," with offices in New York and Washington. It is pointed out that there seems to be considerable confusion in the minds of the lay public as to whether the "National Health Service" is a government agency (U. S. P. H. S.) or a volunteer agency. The United States Public Health Service points out that publications of the "National Health Service" are written with manifest attempt to create the impression that it is a government agency, which it is not; that its field representative represents himself to be a physician, but is not, and that its "physician-in-chief" at one time was convicted of using the mails with intent to defraud and was sentenced to a term of four years in the Atlanta penitentiary.—Ohio Health News.

The "Equalization League" apparently is becoming active in efforts to "equalize" the California Board of Health; by which they mean to make it a mixed board composed of all varieties of "doctors by law."

Why not? If the state licenses these miscellaneous "sciosophists" and thereby approves them as competent to diagnose and treat the infirmities of individuals, it is logical for the same authority (?) to authorize them to practice the far simpler profession of public health.

When physicians oppose this "equalization" move, as of course they will—even though it would add greatly to their business—watch the "sciosophists" yell mercenary! One of many interesting letters on "equalization" activities is published on page 541 of the November issue of *Better Health*.

According to the Public Press—

The "Soul and Body Clinics" have struck the snag CALIFORNIA AND WESTERN MEDICINE predicted they would strike when all the propaganda that a great church could influence was in full swing. Unless they are strikingly guileless the strong "soul group" knew precisely where they were going when they induced Doctor Cowles and other doctors to help them practice medicine. Cowles ought to have known better, but if press dispatches are approximately true he is more angry now than a good soul saver should be:

"There has come to the attention of the medical profession," Cowles recently declared, "hundreds of cases where men, women, and children have died horrible and lingering deaths because of the neglect resultant from priests playing on spiritual emotions."

In any event, we "labeled" those "soul and body clinics" correctly a long time ago.

The State of New York spent in 1924 \$580,762 for the care of 911 syphilitic insane admitted during the year. The United States Public Health Service calls attention to the important facts that this expenditure of over half a million dollars is the cost of institutional care alone, in one state only, and for but one of the hopeless disabilities resulting from neglected or inadequate treatment of syphilis, either in the early or late stages.

Speaking in a Methodist church in Manhattan, a doctor cried out against the imperfection of the age. He was Dr. Eugene Lyman Fisk, Medical Director of the Life Extension Institute. He said that, of 400,000 persons examined by the organization in twelve years, *not one*

perfect physique had been found. "More than 60 per cent of those examined," he said, "have been found in need of some important medical attention, and practically all have required some modification in their mode of living."—TIME.

In the serious matter of whether eye tests of school children shall be made by physicians, nurses or teachers, the requirements of the law are again important factors. In Alabama, California, Illinois, Indiana, Kansas, New Jersey, New York, and Pennsylvania, either physicians or nurses working individually or together, make the eye tests. In each of these states the law specifies that physical examinations either may be made or shall be made by physicians. In other states, such as Connecticut and Massachusetts, the law specifies that the examination shall be made by teachers.—Report of National Committee for the Prevention of Blindness.

Crab—A new advertiser, whose announcement begins in this issue, approached Mr. Flynn, our representative, recently with a request to advertise crab meat. We frankly admitted that we knew very little about crab meat, and neither did they. Under Mr. Flynn's direction, therefore, the prospective advertiser consulted Professor Hanzlik and other competent authority and brought for our information a prepared statement about this food which has proved so informative to this editor that we believe we are justified in utilizing space to pass extracts from it on to the medical profession as a whole. In brief, this investigation shows that:

"Japanese canned crab meat," which is now extensively imported, is prepared from what is known as the king crabs, which live in abundance in the northwest corner of the Pacific Ocean—off the island of Hokkaido, Seghalein Island and the Kurils, and along the coasts of Marine Province of Siberia and Kamchatka Peninsula, where the cold currents are prevalent. They never live in warm water.

The king crab has a very hard shell and unusually long and strong legs. It grows to quite a large size, sometimes weighing as much as twenty pounds. However, the ordinary-sized crabs for canning purposes weigh about an average of eight pounds—running, in length, from 3 to 4½ feet from the tip of the longest leg of one side to that of the other side through the center of the body. Crabs are caught with large nets, which are lowered down deep to the floor of the sea and left for a few days. Catching of females and small masculine crabs is prohibited by ordinance.

Unlike other crabs it is a clean feeder, and as it lives in clear cold waters remote from densely populated lands, its meat is quite free from the dangers inherent in scavenger shell fish and those that thrive in polluted waters. Its meat is sweet and finely flavored. The legs and body are covered with thin skin. When properly boiled, the skin turns to a fine strawberry color and the meat to a milky white. King canned crab meat contains 18 per cent protein, 3 per cent fat, and furnishes a fuel value of thirty calories per ounce, though the quantities are varied, according to seasons. According to some marine food authorities, it contains relatively large quantities of glycogen, which, in combination with its rich protein, gives so much more credit to its food value.

The canning of this food is becoming a great industry. In addition to canneries ashore, it is now packed extensively by what is called "floating canneries," steamers of 1000 to 3000 tons, provided with modern fishing and canning equipment.

The Japanese Government keeps a very close watch on the quality and methods of packing this crab meat. Under its auspices the Japanese Canned Crab Packers and Exporters Association was organized in 1923, comprising all of the packers, exporters and dealers, which exercises a strict control over every phase of the industry. Under the present inspection rule the goods are classified into four grades—fancy, choice, fair, and passed.

The food and commercial value of these crabs were long unknown. About twenty years ago, Mr. T. Domoto, the president of the North American Mercantile Co. of San Francisco, happened to hear that fishermen of Hokkaido were having a very hard time from crabs that so often tore their nets, and these crabs lived in such abun-

dance that it was impossible to provide against their damage. Mr. Domoto made a trip to Hokkaido, and seeing good possibilities, started an industry which last year produced 190,001 cases of this luscious food.

The total import of Japanese canned crab meat to this country in 1924 was 96,145 cases, of which about 75,000 cases were fancy. Although the United States consumes the bulk of the product, it is now well established in other countries.

Long Beach Community Hospital recently passed the following interesting resolution regarding nurse anesthetists:

"WHEREAS, The California Medical Association has declared that the administration of anesthesia is the practice of medicine.

WHEREAS, The Attorney-General of the State of California has ruled that the giving of an anesthetic is the practice of medicine.

WHEREAS, The Board of Medical Examiners of the State of California has ruled that the giving of an anesthetic is the practice of medicine.

WHEREAS, It is against the spirit of the law, against the ethics of medicine, and against the ruling of a large majority of accredited hospitals for nurses or anyone else not legally qualified to practice medicine to give an anesthetic in California.

WHEREAS, The Superior Courts of two states of the United States have already handed down decisions fixing the liability for damages against hospitals in which nurses have administered anesthetics at the time of the death of the patient while under influence of the anesthetic. Judgments against the hospital to the extent of \$10,000 for damages in one case, and \$150,000 in another case have been obtained.

WHEREAS, The Community Hospital of Long Beach intends to comply with the spirit of the laws of the State of California, the code of ethics of the American Medical Association, and all the requirements for an accredited hospital; therefore, be it

RESOLVED, That the administration of general and local anesthetics in the Community Hospital of Long Beach be limited and restricted exclusively to Doctors of Medicine, (M.D.'s) legally qualified to practice medicine and surgery in the State of California."

Motion made by Dr. J. Scott Brown, seconded by Dr. Frank M. Mikels. Passed August 21, 1921.

"Angered because his fractured arm failed to mend rapidly enough to suit him, a patient went to the Stanford Neuropsychiatry Clinic and seriously injured Dr. Edward F. Stadtherr.

"I intended to kill the doctor," the sick criminal confessed. "He was just experimenting on me."

Of the hundred or more major administrative units of the national government, at least thirty are concerned directly or indirectly with some phase of the public health. These bureaus or other divisions are scattered through the ten executive departments and the score or so of independent establishments of the United States. Generally speaking, they carry on their activities more or less independently.

The first important congressional enactment to deal with health was a law of 1798 that authorized collectors of customs to collect 20 cents a month from each American seaman on merchant ships arriving from foreign ports, in order that medical relief might be given to those needing it. Out of this activity grew the Marine Hospital Service, though it was not definitely organized as such until 1870.—Linsley R. Williams (Journal A. M. A.).

Another argument against advertising is the fact that the majority of advertisements appearing over the signatures of doctors are of men who are neither an honor to their profession nor worthy servants to their communities.

This argument holds. We who have pride in our calling of advertising, and believe some honor attaches to it, are in hearty agreement with the medical men in this particular instance.—Amos Stote (Printers' Ink).

Changes in Health Officers Announced by the California Board of Health:

Dr. Aleck P. Harrison is now Health Officer of Santa Barbara County, succeeding Dr. G. S. Loveren. Dr. Harrison devotes full time to the duties of his office. He is not a member of the C. M. A.

Mr. Frank A. Nikirk is Health Officer of San Leandro, succeeding Dr. Luther Michael. What a commentary!

Mr. C. C. Johnson is Health Officer of St. Helena, succeeding Mr. M. P. Guyon. Mr. C. B. Ardito is Health Officer of Jackson, succeeding Mr. E. Marcucci.

And we talk of health progress!

A. M. A. Requirements for Accredited Hospitals Modified—The Council on Medical Education and Hospitals of the A. M. A. on October 18, 1925, modified the requirements relating to who may practice in an accredited hospital to read as follows:

"In order to receive and retain a position among hospitals approved for the training of interns, a hospital should admit to its staff only reputable physicians who obtained their medical training in, and secured the degree of Doctor of Medicine from, a medical college determined as acceptable by the Council on Medical Education and Hospitals of the American Medical Association. This ruling must be enforced for every person permitted to treat the sick in the hospital or in any of its departments except by nurses, masseurs or other like assistants when acting under the orders of a physician on the regular staff of the hospital. Wherever, because of legislative enactment, public officials deem it necessary to provide hospital facilities for practitioners other than graduates of reputable medical schools, then these should be in a building or buildings which in every way are separate from hospitals for physicians and bearing different names."

The enforcement of this regulation will draw the line of demarkation between cultism and scientific medicine as sharply for hospitals as it has long since been drawn for physicians. However conscience-disturbing the fact may be, physicians do not object to cult hospitals built and managed by cultists for cultists, *when they are so labeled*. It is logical to believe that, were the osteopaths, chiropractors and other cultists honest in their claims of superiority for their various methods, they would be delighted to specifically name and operate their own hospitals rather than being constantly active in attempts to attach to and become part of the educated medical profession and its agencies.

Under this new ruling, supervisors in charge of county hospitals and others whose jobs are so politically uncertain that they are willing to trade with cultists by giving them equal rights with physicians in their hospitals are given a choice of the usual horns of a dilemma. The line of demarkation is clearly drawn, and political units that are in the hospital business for the poor who cannot help themselves and, therefore, must take such services as offered them, can have as many cult hospitals as they want, provided, of course, that they name them separately and make them separate entities, physically and in service, from the hospitals utilized as agencies of scientific medicine.

The cult hospitals will not, of course, receive any form of credit or recognition from educated physicians officially or personally.

In addition to this, it is, of course, as unethical for an educated physician to patronize a cult hospital as it is to share offices or consult with cultists in his private practice.

Again, these decisions are not made for the purpose of fighting cultists, but for the purpose of labeling goods—as we label them under the pure food and drug law—for what they are.

Not a month goes by without seeing litigation between the physician and his patient, with the latter charging the former with negligence in some method of treatment . . . The alleged misuse of the x-ray forms an increasingly large class of this kind of litigation.—A. M. Harris (Medical Times).

Several of our physicians whose names appear in "Who's Who In America," published every two years by A. N. Marquis & Co., 440 Dearborn Street South, Chi-

cago, have been misled recently by a request for a revision of submitted proof copy which, upon casual reading, may appear to be from the editors of this widely used publication.

Careful reading shows the letters and proof to be from "Who's Who Publications, Inc., 799 Broadway, New York City, a different concern, who are putting out a "Who's Who in American Medicine," or at least that appears to be the last name for the proposed volume.

This matter was treated editorially in the Journal of the American Medical Association (October 17), and this additional information is supplied for those interested.

Dosurine—We have given the advertisement of this substance very careful consideration. The opinions we have been able to get seems to indicate that it will do all that its promoters claim for it. It makes the question of routine urine examination, for at least two of the more usual and important possible ingredients, an extremely simple and easy matter—so simple, in fact, that the editor was skeptical about it for a considerable time.

We would be glad to hear the experiences of doctors and laboratories with this substance.

Christmas is so near that we are sure all our readers will be interested in the announcement of the new gift and stationery store of That Man Pitts in the advertising pages of this issue. Mrs. Pitts, who is now conducting the business of her late husband, who was well known to many of you, is so confident that she has a service that will appeal to doctors and their families, hospitals, nurses, and other readers of CALIFORNIA AND WESTERN MEDICINE that she has contracted for paid space for a year in which to make her announcements. The new store at 882 Market Street, San Francisco, is very attractive, and you will find there Christmas cards that are unusual and distinctive, as well as a large selection of gifts.

In succeeding issues this firm will tell you more about the high-grade stationery and office supplies they have to offer at all times. As this is something we all must have, it will be very easy to show our appreciation, in a substantial manner, of the co-operation and confidence Mrs. Pitts has shown in helping support our magazine. Telephone Kearny 8052, and a representative will call on you.

The Vital Capacity of the Lungs in Pneumonia—A study made by John H. Arnett, Philadelphia (Journal A. M. A.), of the vital capacity in thirty-two cases of pneumonia, delayed resolution and empyema, yielded the following data: In pneumonia the vital capacity is greatly reduced early in the disease. The determination may, therefore, be of distinct diagnostic value in doubtful cases. The greatest reduction generally occurs shortly before the crisis. The advent of the crisis may, therefore, at times be predicted in advance. Cases of uncomplicated pneumonia almost constantly exhibit a rapid rise in the vital capacity in the first five to ten days from the crisis. Patients with empyema and delayed resolution do not exhibit such a rapid rise. The vital capacity may, therefore, assist in diagnosing empyema or unresolved pneumonia. The vital capacity increases gradually for months after clinical recovery from pneumonia or empyema has occurred. In many cases it probably never entirely returns to normal.

Non-specific Granuloma of the Intestine Causing Intestinal Obstruction—The case reported by T. Homer Coffen, Portland, Ore., (Journal A. M. A.), suggested a tumor mass resembling tuberculosis or new growth, causing intestinal obstruction. The patient has been under observation for nine years, in which time there have been three operations for granulomatous tumors, causing intestinal obstruction. He was fairly well in the intervals. The first granulomatous obstruction followed an operation for appendicitis, subacute. Subsequent granulomas were associated with systemic evidences of focal infection (sciatica, arthritis, low-grade fever, etc.). The last operation showed coincidental suppurative cholecystitis, and the excised tissues and gall-bladder gave a pure culture of streptococci.

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
W. T. McARTHUR, M. D.....President-Elect
EMMA W. POPE, M. D., San Francisco.....
.....Secretary and Associate Editor for California

1926 ANNUAL SESSION, C. M. A. OAKLAND, APRIL 26 TO MAY 1

The Arrangements Committee wish to remind the members of the California Medical Association that the next annual meeting of the Association will be held in Oakland, April 26 to May 1, inclusive.

The State Council has rearranged the program for this meeting. Two days, Monday and Tuesday, have been selected for the holding of clinics, and the Program Committee are inviting prominent Eastern medical men to conduct these clinics at the different hospitals in Oakland.

These clinics will be interesting and instructive and worth your while to attend.

General sessions will be held on Wednesday, Thursday, Friday and Saturday mornings, and the Section sessions will meet in the afternoons of these same days.

All papers presented at this meeting are to be reviewed by the Program Committee previous to presentation, and the number to be presented is to be reduced.

The clinicians who conduct the clinics on Monday and Tuesday are to read papers at the General Session on Thursday morning.

Special attention is being given to the social features of the program. A golf tournament, to be conducted by the Northern California Medical Golfers' Association, will be held on Monday and Tuesday afternoons. All are invited to participate in this event. Many trophies are to be awarded.

Among the other forms of entertainment will be luncheons, boat and auto rides, teas, receptions, dinner dance, and athletic features.

Mark the date on your calendar and make a special effort to attend. We promise you a good time.

(Signed) CLARENCE A. DE PUY, M. D.,
Chairman of Arrangements Committee.

HISTORICAL DATA DESIRED

Dr. Emmet Rixford, chairman of the Committee on the History of the California Medical Association, has sent the following letter to all county secretaries. Will each member of the California Medical Association appoint himself a deputy committeeman to assist this very important committee in collecting material and data?

To All County Secretaries:

The Committee on the History of Medicine of the California Medical Association is greatly desirous of collecting all printed matter extant on the subject of the history of medicine in California for deposit in some safe place where it will be made accessible to students of local medical history. It is urged that the secretaries of the county medical societies undertake, as deputy committeemen, as it were, to interview all of the older men in the profession, or their families or successors, who might have old California medical journals, pamphlets, photo-

graphs of local medical men or hospitals, etc., and forward to the office of the association (California Medical Association).

It is further suggested that each secretary arrange with some member of his county society to prepare a paper on the local medical history or to gather data which the memories of the older man may have retained of events of medical importance, such as founding of hospitals, of local medical societies, etc., etc., contributing the same to the committee, who will arrange for publication of the material as occasion offers. Very respectfully,

EMMET RIXFORD, *Chairman.*

C. M. A. OFFERS PRIZES FOR BEST MEDICAL ESSAYS

At the 148th meeting of the Council, held at Long Beach, November 8, 1924, it was

RESOLVED, That two prizes of \$150 be established—one for a paper on original research, and one for a paper on a clinical subject; and that these prizes be open to the members of the C. M. A. only, and be competed for at the 1926 convention; and, further, that the scope of the material be determined by the committee.

The following committee was appointed: Albion Walter Hewlett, chairman; Dudley Fulton, M. D., 523 West Sixth Street, Los Angeles; and Fred Fairchild, Woodland.

On Doctor Hewlett's resignation, due to illness, Walter C. Alvarez was appointed chairman. The committee regrets that the time for careful work is unavoidably so limited this year.

The accompanying rules for the submission of competing papers have been approved by the Executive Committee:

Rules for the Submission of Papers

1. Any member of the California Medical Association is eligible to compete for the prizes. Any question arising as to the eligibility of a candidate or the admissibility of his essay will be settled by the decision of the Council.

2. Manuscripts must be typewritten on one side of the paper; they must be double spaced; and they must not be folded or rolled. Illustrations or charts must be marked with the title of the paper to which they belong.

3. Essays must contain not more than 4000 words. In judging a paper, the committee will take into account the basic importance of the work done and its novelty; the thoroughness with which the research has been carried out; the clearness with which it has been written up; and the neatness of the manuscript and illustrations.

4. Papers should be sent, preferably by registered mail, to Dr. Emma Pope, Secretary of the California Medical Association, 1016 Balboa Building, San Francisco. They should be identified by a nom de plume or motto only. A separate envelope should be sent to Dr. Pope containing the author's name and his nom de plume or motto, so that after the award is made the name of the writer can be found. Any return addresses or other distinguishing marks will be removed from the wrappers before the papers are turned over to the judges.

5. All papers must be in the hands of Dr. Pope before March 15, 1926, in order that the judges may finish their work in time for the meeting of the association.

6. The judges reserve the right to withhold the award, in the event that no paper comes up to the standards of excellence which they feel should be set.

7. If, in the judgment of the editor of CALIFORNIA AND WESTERN MEDICINE and the Editorial Councilors, the paper on laboratory research is too technical or otherwise unsuitable for inclusion in CALIFORNIA AND WESTERN MEDICINE, the prize winner will be allowed to publish it in some special journal and will be required to make an abstract for the readers in California.

8. Inquiries relative to the prize contest should be addressed to the chairman of the committee, Walter C. Alvarez, 177 Post Street, San Francisco.

A PLEA FOR A KEEN AND ACTIVE INTEREST IN THE CONTINUED ARMS OF THE UNITED STATES ON THE PART OF THE MEDICAL PROFESSION

Should the United States ever become subjected to the commands of an insolent foe it will be because physicians do not now take their places and do their duty in the organization of our country's man-power.

It is hardly too much to say that there is not a single physician in this glorious country of ours who would not instantly drop his own affairs, and hurry with justifiable pride to a sick President if called.

Is not the President the Commander-in-Chief of the Services, and should not the civilian physician prepare himself to efficiently aid the President in his determination to defeat a foe and by that defeat to protect the people and fortify the nation's place in the security of the world?

I maintain that there is no essential difference between the doctor's duty in the welfare against the enemies of an individual and his larger responsibilities as Medical Reserve Officer in aiding the body politic.

Men of high knowledge of war recognize that organized medical experience is absolutely imperative for quick mobilization and for quick demobilization. As a matter of fact, much of the effectiveness in all branches of military service rests upon the wise utilization of the medical, surgical, and dental knowledge of our profession.

This professional learning must, for its full advantage, be correlated with training directed toward a realization of the specific processes associated with the conduct of war. This realization can only be gained by attending a school of military methods conducted by those who know, and this has been made easy by correspondence and adequately supported training camps.

It follows that it is the plain duty of any patriotic medical man to willingly, and without propaganda, apply for a commission which is, in every truth, the gateway to this consummation.

Another way of looking at this and emphasizing the national duty of the doctor is to define the creation of an army under four heads:

1. *Pre-mobilization*—a state wherein the medical men of the country, in time of peace, strive in a selfless way to bring health to the community and by experimentation and persistent effort advance new methods of protecting the individual so that he, when called upon, will present himself with the maximum physical and mental strength. The weaker ones, by this medical procedure, are also prepared for some duty other than the firing line. During this pre-mobilization period, the special education of the commissioned civilian doctor is attended to by the regular officers of the medical corps and the creation of all varieties of "cog-wheel" units; general hospital, evacuation hospital, etc., are made and ready for installment.

2. *Mobilization*—The quick bringing together of healthy men for fighting and executive purposes and less healthy men adequately to aid in subordinate positions; thus preventing sound men wasted in minor jobs, and the careful registration of pre-existing defects, both mental and physical, in each and every individual called to arms. Thus every man sound or otherwise is by the physician's preparedness given a place in the machinery of war.

And so it comes to pass when war is declared, great portals of entrance are equipped in every conceivable way to rapidly and completely take advantage of the man-power. At the same time the future of the individual soldier is protected by a knowledge of pre-existing conditions, or the absence of them, when a consideration of disability, permanent or otherwise, is demanded. Compare this with the hopeless chaos of 1917, when patriotic civilian medical men hurried uneducatedly to the aid of the nation, and were mortified by their ignorance and their well-meant but misdirected energy.

3. *Demobilization*—Here the great portals of entrance are used as portals of exit, and all the machinery of mobilization is utilized for the welfare of the nation and the man. Justice is given to all, and the maximum restoration of the wounded in mind and body secured.

4. *Post-Demobilization*—a state wherein the civilian commissioned doctor, with his special knowledge of the demands of the service, can protect and direct the health of the people who have served, disabled or otherwise.

And so post-demobilization merges into pre-mobilization and the cycle is complete; and thus, also, the service of the medical profession is rendered in the highest efficiency and becomes worthy of its highest attributes and traditions.

It must be kept in mind that all this service carries with it but little inroad upon the private time of the doctor, and the Defense Law protects him from every other form of military duty other than a call to arms against a foreign nation. With so little to lose and so much to give, it is an amazement to me that the march to commission is so halting and so seeming an evidence of a lack of patriotism.

J. WILSON SHIELDS.

ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting of the association was called to order by the president, H. B. Mehrmann, October 16 at 8:20 p. m. The program was presented by the staff of the Samuel Merritt Hospital. In their program they aimed to point out recent advances in medicine. It was snappy and instructive. A maximum of nine minutes was allowed each speaker.

Robert A. Glenn, in his paper, "The Administration of Glucose in Combating Toxemia," outlined the physiology of the metabolism of glucose and the role played by that substance in body maintenance. The relation of the oxidation of glucose to disturbances of the functions of the liver, kidneys, and other organs was described. An estimate of the quantity of glucose necessary for the body at rest and at work, and of the amounts that might be administered intravenously, which was the method of choice. Certain precautions in the preparation of the solution were given, as well as a simple technic for the sterilization of such solutions.

Frederic M. Loomis read a paper written in a somewhat facetious vein on "Delirium Operatorium," a clever phrase of De Lee's, defined as "an acute lapse of operative reason which may affect the accoucheur after much loss of sleep, the nervous wear of a prolonged labor, the exactions of the family, combined with the sudden appearance of extraordinary difficulties." It was pointed out that birth injuries are much more frequent than supposed, especially in breech cases, and that these injuries are more often due to haste and panic than to essentially impossible situations. The writer urged more deliberation in pelvic maneuvers, and more gentleness in management—"not to mention those lofty souls who disdain any management except the selection of a solid place to brace their feet."

A. C. Siefert gave a brief essay on "Cholecystography," as originated by Graham and his associates. He discussed the theories and facts upon which the method is based, as well as the criteria of normality and pathology of the gall-bladder when examined by this test. He concluded that cholecystography is a great step in advance of the ways of roentgenological examination of the gall-bladder hitherto used, and that the oral administration of the dye is sufficiently safe to be used routinely.

A. A. Alexander discussed differential diagnosis of organic and functional heart disorders. Many heart conditions, he said, are classed under "myocarditis." This diagnosis should be made with care. Myocarditis is an element in a pancarditis in such conditions as rheumatic fever and syphilis, whose organisms invade the heart, but in most febrile conditions the cardiac muscle is damaged by circulating toxins, rather than by inflammatory changes. By means of case report he pointed out the apparent identity of symptoms in functional and organic disorders. Then taking up the symptoms separately, he indicated differential considerations. Many patients, he said, with or without actual heart disease, readily develop a fear neurosis or "cardiophobia," and in this connection deplored the tendency to stress to the patient the existence of cardiovascular findings, such as murmurs or alterations in blood pressure. In organic heart disease treatment, in his opinion, cannot effect a cure. One must consider (1) the avoidance of further damage by removing obvious infection; (2) adjustment of the patient's habits of life and work to his heart reserve, rather than attempting to fit the heart reserve to the patient's

effort; (3) the use of drugs, if heart failure threatens. Functional disorders tend to relapse, but do best with hygiene and suggestion to rebuild the patient's confidence.

In an analysis of twenty patients, the following conclusions were noted by Francis Shook in his paper, "Maxillary Antrum Infection in Children." (a) The symptomatology is local and general. The most frequent local symptomatology is (1) impaired nasal respiration, (2) frequent coryza, (3) mucoid discharge, usually post-nasal, (4) "crusting" in anterior nares, with sneezing attacks on attempts to dislodge the crusts by sniffing, (5) bronchitis or night coughing caused by post-nasal dropping into the bronchi. (b) General symptomatology—absorption from the chronic infection causes the general symptomatology. In order of frequency, the following has been noted: (1) The child is below par in strength and usually in weight; (2) pyelitis and cystitis; (3) beginning degeneration, such as myocardial; (4) occasional myalgia (growing pains) tenderness at tendon insertions, joint involvement (rare); (5) occasional febrile attacks. Treatment—The most satisfactory combination has been (1) infratubular drainage of the maxillary antrums under nitrous oxide or ether-vapor anesthesia, (2) after treatment of antrums—suction, lavage, vaccine, anilin dyes (acriflavine or gentian violet), (3) hygienic and dietetic supervision by family physician or pediatrician.

C. L. McVey spoke on the "Present Status of Intravenous Dye Therapy in Septicemia," and drew inferences from Hugh Young's report on 210 cases.

In his subject, "Fallacy of Easy Sterilization of the Urinary Tract," E. Spence DePuy discussed the newer urinary antiseptics, devoting special consideration to hexyl resorcinol and mercurochrome, in particular. The writer called attention to the widespread desire of all for some easy method of sterilization of the urinary tract; one that would free the urine of pus, and relieve the patient of the symptoms attendant upon infection—an antiseptic that required possibly no investigation of the patient's condition and which might be self-administered. Desirable as such easy therapy may be from the viewpoint of both physician and patient, however, the paper pointed out that, with such agents as are at present available, simple administration of drugs, either orally or intravenously is generally not sufficient to sterilize the urinary tract for the two following reasons: (1) Many urinary tract infections are secondary to distant foci. (2) The more severe urinary tract infections are frequently the result of obstruction, either in the urethra, at the vesical neck, in the ureter, at the kidney pelvis, or in the kidney itself. Obstructions cause a residual or stagnant urine. Stagnant urine is a favorable culture media. To secure sterilization of the urinary tract, then, requires that focal infections be eliminated and that obstructions be overcome. It was then pointed out that the natural inference is that nothing, so far discovered, has taken away the necessity for investigation and diagnosis. And that in the case of mechanical obstructions, ureteral kink, stricture, etc., it is not so much the drug that is employed, whether by mouth, intravenously, or even by instrument to the infected part, as it is to the relief of obstruction by instrumentation, plus all the known urinary antiseptics—mercurochrome, hexyl, resorcinol, and nitrate of silver solutions.

M. L. Emerson's subject was "Carcinoma of the Bowel." He presented two of his six patients, pre-operative pictures, also lantern-slide demonstrations of the operative technique. He stated that, by deperitonizing the bowel tumor before removing the same, there is eliminated the much-dreaded peritonitis so frequently complicating this type of work, and the operative mortality was greatly reduced. By circumscribing or walling off the growth with the peritoneum, practically placing the growth outside of the abdominal cavity, it facilitated and made visual the application of radium and x-ray. Where it was possible to mobilize the growth, the tumor mass and bowel was lifted out of the abdominal cavity and deperitonized around the loops of the bowel, the tumor being removed a few days later, thereby shutting off the abdominal cavity much after the fashion of Mikulicz's operation. The cancerous growth is then removed a few days later, and further application of radium or x-ray, if thought necessary. By the application of radium, x-ray and surgery, we have been enabled to make these patients fairly com-

fortable, and some of them over a period of three years. The doctor also stated that Crile and other operators have reduced the operative mortality of this type of work down as low as 2 per cent by using the several-stage operation.

In his brief discussion of "The Present Status of Radium and X-ray Therapy," W. H. Sargent stated that when the best interests of the patient are considered, radiation therapy is neither a substitute nor competitive of other therapeutic measures, but a valuable adjunct to both surgery and medicine, and in advanced malignancy it is the greatest palliative so far known. In early cases he deems it inadvisable to attempt a cure with radiation when the disease can be completely removed surgically. In cancer of the breast with glandular involvement, he believes a more thorough trial of pre-operative radiation seems justifiable, since surgery alone can offer so few chances of cure. Sargent also believes that greater co-operation between physician and radiologist is much to be desired, and will undoubtedly be productive of better results.



CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the offices of Drs. Abbott and Hely at Richmond, October 31.

The lecture was delivered by Hans Lisser on the pathology, diagnosis, and treatment of ductless glands, illustrated with lantern slides. The lecture was classical. This is Dr. Lisser's third lecture to the Contra Costa Society in eighteen months; the attendance was up to the standard. The unanimous verdict of the members present was that they wanted Dr. Lisser again. This we consider very complimentary to him.

The following members were appointed by the president to arrange for the annual meeting to be held this month to elect officers for the ensuing year: L. M. McCollough, S. N. Weil, L. H. Fraser.

The following members were present: C. E. Camp, San Pablo; G. M. Bumgarner, J. W. Bumgarner, H. L. Carpenter, P. C. Campbell, L. H. Fraser, Denninger-Keser, U. S. Abbott, L. St. John Ely, Rosa A. Powell, Hall Vestal, Richmond; John and Mrs. Beard, Martinez; T. W. Lavery, University School of Medicine; F. L. Horne, J. M. McCollough, William A. Rowell, Crockett; J. T. Breneman, El Cerrito; S. N. Weil, Selby.



FRESNO COUNTY

Fresno County Medical Society News (reported by J. A. Montgomery, secretary)—The Fresno County Medical Society has begun a campaign for diphtheria immunization.

On October 17, Dr. Halliday of the State Board of Health addressed the Medical Society at a luncheon-meeting. He demonstrated the technique of the immunization by giving several first treatments to children from the schools. He also discussed the work being done in California counties, as well as that that has been done in New York City.

Dr. Matthewson of the Fresno City Board of Health outlined a plan whereby this work should be done as completely as possible by the physicians in their own offices, urging their families to come for this work to their own physicians. He is conducting a campaign of newspaper publicity toward this end, and the city schools are sending out pamphlets of information to all homes. Physicians in the county are urged to report to the City Health Office the number of children receiving treatment.

It is the intention of the society in this campaign to avoid the use of the general free clinic for this purpose, and to confine the free treatment to those applying to the County Hospital Clinic and found entitled to charity.

A meeting of the Fresno County Medical Society was held on November 2. Dr. James Percy of Los Angeles gave the address of the evening. His subject was "The Treatment of Cancer." He discussed the methods of use of the cautery, the proper manner to use the cautery, and demonstrated some of the cauteries used in this work in his own practice.

At this meeting Edwin Mott, Charles Fulmer, and Edward Halley were elected to membership in the society.



HUMBOLDT COUNTY

Humboldt County Medical Society (reported by L. A. Wing, secretary)—The following meetings of the Humboldt County Medical Society were very much enjoyed by a large attendance of the members. The June meeting was held in Ferndale, as guests of Doctors Brunner and Ring. Papers were read by Doctor Brunner, on "Diabetes," and Doctor Ring on "Treatment of Burns."

The July meeting was held in Scotia, as guests of Doctors Cottrell and Haight. Papers by Doctor Cottrell on "Injuries to the Spine," and Doctor Haight on "Pleurisy With and Without Effusion," were read.

On October 6, a meeting was held in Eureka. Doctor Charles C. Falk entertained the society with a very enjoyable talk on his experiences with the medical world while abroad.



MARIN COUNTY

Marin County Medical Society (reported by John H. Kuser, secretary)—A meeting of the Marin County Medical Society was held on October 29 at Doctor Jones' office in San Rafael. The following members were present: Frank Cannon, O. W. Jones, W. F. Jones, L. L. Stanley, G. M. Landrock, and J. H. Kuser. The secretary was requested to send to the A. M. A. for twenty copies of "Principles of Ethics," to be distributed among the members. Notes taken by Dr. Kuser, Health Officer of Marin County, at the Health Officers' meeting at Long Beach were read and considerable interest was shown by a lively discussion. The necessity of co-operation of the organized profession to control and prevent disease was well brought out.



SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary)—The local society convened at the Sacramento Hotel on the evening of October 20 for its regular meeting. In addition to twenty-two members, the society was treated to a visit from the entire State Board of Medical Examiners, who, at the time, were met in their yearly Sacramento session. Those attending were Phillips of Santa Cruz, the president; Brown of Los Angeles, the vice-president; Pinkham of San Francisco, the secretary; Brem and Smith of Los Angeles, Morton of San Francisco, Harris of Sacramento, Yates of San Diego, and Adams of Oakland.

The minutes of the September meeting were read and approved.

Case Reports—Dillon reported a case of a complete right pneumothorax. The boy had fallen and had lacerated a small area mesial to the right shoulder. In a short time air had filled the entire right chest cavity. X-rays of the condition on the sixth day were presented.

Gundrum reported a case of a man whom he had referred to Green. Despite the fact that there was neither impaction nor any pathology of the tooth-bud, a fully grown tooth had not come in to take the place of a deciduous one. These two reasons are the only ones to explain the lagging of a fully formed tooth. No explanation could be offered for its lack of descent.

The paper of the evening, "Infant-Feeding—A Survey," was presented by Edward S. Babcock. He said:

"Infant-feeding is one of the most important branches of medicine, but, unfortunately, is one of the most neglected. Our high infant mortality rate is due to a lack of instruction, or improper instruction to mothers, in the care and feeding of infants. Infant welfare centers throughout the country have played an important part in decreasing the infant death rate.

Obstacles to breast-feeding, and methods of overcoming them, are discussed. Manual expression of the breasts is advocated to increase a failing milk supply.

The history of the development of artificial feeding from the time of Biedert, Liebig, and Rotch to the present time were given.

Water, proteins, carbohydrates, fats, salts, vitamins, and acidity of cow's milk were discussed in turn. The known methods of modifying, changing or substituting each were given. Proprietary infant foods, largely carbohydrates, are grouped into simple sugars, dextri-maltose compounds,

and preparations containing more or less starch. Preparations advertising direct to the laity are a menace to public health. A boiled cow's milk, water and Karo syrup mixture, correctly proportioned, is advocated for routine feeding, because of simplicity in preparation, convenience and cheapness.

Computation of caloric values and examinations of stools were discussed as important checks on the feedings.

Mixed feeding was discussed briefly. Feeding of premature and sick infants is not considered in this paper. The so-called difficult feeders are considered medical cases and should receive special attention. Many of them are found to have a pyuria, otitis media, or congenital abnormality of some nature.

Intolerance to various food elements and allergy were briefly considered.

Dental caries, malocclusion of the teeth, speech defects, chronic constipation, smallpox, diphtheria, and many other infirmities of later childhood and adult life could be practically eradicated if all mothers were properly instructed in infant-feeding and care.

In the discussion, Pitts discussed the possibilities of galactagogues. Pitts believes that it is possible to measurably run up the quantity of milk in twenty-four hours. Gundrum added that, without any question, he believed beer to be a definite galactagogue. He related how Stephanson had told him of types of infant-feeding in the Antarctic. Most of the mothers chewed up meat and then fed it to their babies. It was really remarkable how they thrived. Hall told of Health Department methods in the control of the local milk supply.

In closing, Babcock stated that extensive experimentation had been conducted in Chicago on the possibilities of galactagogues. Their final conclusions, based on the most careful measurements, show that there was no galactagogue among the great number of supposed ones. Regarding the question of goat's milk, Babcock declared that this contained too much fat and salt. He also added that, despite the fact that he carefully follows the Health Department reports, he uses boiled milk in his infant formulas.

Brief remarks were made by all members of the Medical Examiners. Several spoke directly on the paper of the evening. Yates, as a dermatologist, has one feature connected with goat's milk—eczema. Harris and Smith, both of whom had returned from their recent trip through England and Ireland, told of the pathetic condition of the cattle in Ireland, where whole flocks were definitely tuberculous. The results can be seen on all sides.

Applications for Membership—The applications of Norris R. Jones, Angus A. McKinnon, and Joseph L. Mullin were read for the first time. After the second reading of the applications of Clyde G. Reynolds, Edward P. Moser, Hans F. Schluter, and Charles I. Titus, a vote was taken. All were unanimously elected to membership in the local society.

Report of the board of directors announced a paper by G. Parker Dillon, concerning diagnostic problems of the rectum at the November meeting.

Communications—One from Colonel Edward L. Munson was read, thanking the local society for their sponsoring plan of the M. O. R. C.

State secretary's note calling attention to the resolution concerning the submitting and approving by the Program Committee of the State Society of all papers to be read by any member of the association at any annual meeting, and the space to be given them in CALIFORNIA AND WESTERN MEDICINE, was read.

A letter from Dr. Leo P. Bell, asking the local society to be one of several societies to present a film, entitled "How the Fires of the Body Are Fed," was read.

An invitation from City Manager Bottorff to visit the city's filtration plant was considered under new business. The invitation was accepted, with the suggestion that some night be named for the inspection.

Motion was made, seconded, and carried that the local society join with Woodland, Chico, Red Bluff, Redding, and Stockton in the public presentation of the film, "How the Fires of the Body Are Fed." The meeting adjourned to the banquet table.

SAN FRANCISCO COUNTY

Franklin Hospital Clinical Society (reported by Ewald H. Angerman, secretary)—The Franklin Hospital Clinical Society met at the hospital on October 5, J. Wilson Shields presiding.

Dr. Westerfeld reported a case and discussed the subject of "Echinococcus Cyst of the Liver." Dr. Schaupp's subject was "The Heart in Pregnancy."

St. Luke's Hospital Clinical Club—St. Luke's Hospital Clinical Club resumed its regular meetings on Thursday, November 5, the speaker of the day being Clement H. Arnold. His subject was "Some Interesting Cases of Congenital Heart Disease." He stated that although the chief interest of congenital abnormalities is to the embryologist and pathologist, and the greater number of cases occur in children, yet it had been his good fortune to have seen several cases in adults. Persistence to adult life makes the recognition and treatment of congenital heart disease of some moment, particularly in the management of the patient's life and our ideas of prognosis.

His talk was illustrated with drawings demonstrating embryological development of heart and blood-vessels and abnormalities resulting from such lack of development. He presented the history of four very interesting patients which had come under his observation—one with pure dextrocardia and anomalous electro-cardiogram; another of combined mitral stenosis, patent interventricular septum and bifid apex which came to autopsy; a third of patent interventricular septum which came to autopsy, and the fourth of patent ductus arteriosus. These adults ranged in age from 35 to 62.

The speaker outlined the main phenomena by which the presence of congenital malformations could be recognized, following this with a short axiomatic recapitulation of cardiac symptoms and findings, as related to congenital heart disease, summing up with the statement that the presence of congenital defects in any other part of the body is in favor of any heart affection present being congenital.

St. Joseph's New Buildings—Variable Staff Program—St. Joseph's Hospital of San Francisco has begun its extensive fireproof reconstruction by demolishing its older structures, in preparation for the new units, which will provide 200 patients' beds and for 150 Sister and lay nurses and other attachés and incorporate the latest ideals in hospital construction. All of the patients' accommodations will be maintained until after the rebuilding, when the last of the present structures will be torn down, making way for others planned.

The staff met on November 18 and enjoyed a varied program based on recovered cases from the hospital. P. Collischonn spoke of the "Talma Operation" and outlined a case where abdominal ascites was permanently relieved, after previous repeated tapplings. D. E. Stafford discussed "Ectopic Pregnancy," illustrating it with a recent case. J. C. Newton read a paper on "Dermoids," describing a case of double unilateral lesions in a girl. "Medical Notes From the East" were given by T. I. Janes, and included observations with Farr, the Mayo staff, and Crile. W. T. Cummins, pathologist, differentiated teratoma and similar tumors, and Lloyd B. Crow, radiologist, showed mediastinal x-ray films.

A. S. Musante, head of staff, offered resolutions respecting the death of Doctor Albion Walter Hewlett, Professor of Medicine at Stanford University, who was on the consultation staff of St. Joseph's and had addressed the meeting recently on post-operative medical treatment. William Quinn and Howard Dixon presented case histories of patients with pneumonia and gas phlegmon of the neck, respectively.

The program of December 9, "Pediatric Night," follows:

"Advances in Pediatric Diagnosis," C. F. Gelston; "Modern Treatment in Children's Diseases" and "Surgical Considerations in Pediatrics," Emma Willits.

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SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by P. C. Means, secretary pro tem.)—The regular meeting of the Santa Barbara County Medical Society met in the staff room of the Cottage Hospital November 9. President F. R. Nuzum introduced Willard J. Stone, of Pasadena, who presented a very careful and interesting

paper on "Certain Aspects of Heart Disease, Including Coronary Occlusion, Angina Pectoris, and Adhesive Pericarditis." Free discussion showed the interest with which it was received. Harry L. Schurmeier presented a patient who had had, some months ago, trophic ulcerations on the toes and had been cured at a Southern "sanatorium" by starvation for two weeks and rest in bed. The patient was much impressed, and said there was explained to him "the harm of combining vegetable and animal proteins." The dangers of starvation and the temporary value of rest were pointed out in the discussion, but did not shake the faith of the patient.

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YOLO-COLUSA COUNTIES

Yolo-Colusa County Societies (reported by John D. Lawson, secretary)—October 16—Regular quarterly meeting in conjunction with Woodland Clinic conference.

Amendment to the constitution was proposed, changing the name of the society from Yolo County Society for Medical Improvement to the Yolo-Colusa County Medical Society. This will be voted on at the next regular meeting.

Program—Observations on recent trip in the Middle West and East, by John D. Lawson. Presentation of a case of diabetes with lipemia retinalis and xanthomata diabetorum, by J. Edward Harbinson. Differential diagnosis in an upper abdominal tumor, by Leo P. Bell.

Russell G. Frey, resident physician at Woodland Clinic Hospital, was elected to membership in the society. Walter J. Spencer, member of the staff of the Woodland Clinic, has severed his connection with that institution. He expects to enter into the practice of pediatrics in the southern part of the state.

Fred R. Fairchild has just returned from a month spent in the Hawaiian Islands.

H. D. Lawhead, Yolo County Health Officer, reports a rather unusual amount of diphtheria in the county, notwithstanding a concerted effort toward the popularization of toxin-antitoxin prophylactic.

The public lectures given monthly by the Woodland Clinic were resumed in October, when Dr. H. D. Lawhead spoke on "The Doctor of Forty Years Ago and Today" With Some Personal Reminiscences."

At the November meeting Dr. J. Edward Harbinson spoke on "Various Types of Infectious Diseases, Their Prevention and Treatment." This was illustrated by a moving picture, entitled "How Disease is Spread."

Woodland Clinic—The directors of the Woodland Clinic have authorized the construction of the first unit of a new hospital building, and construction is to begin immediately. The new unit is to have a capacity of seventy-five beds, which will be a considerable addition to the fifty-five beds now in use. The building is to be absolutely fireproof, and will incorporate many new features of hospital construction. This will be known as the first unit of a building which, when completed, will consist of four lateral wings with a central administration building. Each wing will cost approximately \$100,000 and the administration building probably twice that amount, so that the completed structure will cost approximately \$600,000. The greater portion of the new structure is to be devoted to actual patients' rooms. Certain portions of the present building will be utilized to give additional space to the various departments, the size of which will necessarily be increased, owing to the addition in the number of patients. The name of the corporation has been the Woodland Sanitarium, but owing to the fact that the hospital has always handled general medical and surgical work the title was a misnomer. The entire organization is now to be known as the Woodland Clinic. Consequently, the hospital department will be known as the Woodland Clinic Hospital.

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CHANGES IN MEMBERSHIP

New Members—Roger W. Barnes, Ivyl Clare Bedwell, Warren P. Clark, Willis M. Gardner, Wesley J. Hommel, Ralph R. Holzman, Robert W. Langley, Arthur E. Mark, Ihil Rubenstein, Fred McKay Bantum, Edward R. Cox, Los Angeles; Cecil F. Charlton, Pasadena; William Joseph Eckerle, Wilmington; Richard J. Morrison, Santa Monica; Richard C. Rush, San Fernando; Walter Claude Thomas, Long Beach; Solomon N. Weil, Selby; Elwyn H. Welch, Pomona; Preston W. Whitaker, Van

Nuys; Henry A. Beaudoux, Christopher Howson, Theo C. Lawson, Oakland; Henry L. Charles, Alhambra; Elton Russell Clarke, Burbank; Rupert G. Doupe, Tehachapi; John F. Edwards, Hollywood; Belle C. Eskridge, Monrovia; David Martin Ghrst, Glendale; Sidney Gidoll, Keene O. Haldeman, Harry C. Shepardson, San Francisco; William McKee Moffatt, Santa Barbara; C. O. Petty, Fullerton; Virgil G. Presson, Santa Ana; George Henri Rohrbacher, Stockton; Peter N. Root, Bakersfield.

Transferred—R. C. Burkett, from Los Angeles County to Orange County.

Marshall C. Cheney, from San Francisco County to Alameda County.

Cory C. Ledyard, from Santa Clara County to Los Angeles County.

Frank E. McCann, from Tehama County to Los Angeles County.

G. A. Wislicenus, from San Francisco County to Washington Medical Association.

Resigned—From Los Angeles County: Milton A. Barndt, T. Furusawa, W. W. Murphy, F. T. Nakaya.

Deaths—Hewlett, Albion Walter. Died at Philadelphia, November 10, 1925, age 50. Graduate of Johns Hopkins University Medical School, 1900. Licensed in California in 1903. Doctor Hewlett was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Legault, Joseph William. Died at Oakland, October 23, 1925, age 58. Graduate of Victoria University, Canada, 1890. Licensed in California the same year. Doctor Legault was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

McConnell, Edward Giles. Died at San Francisco, October 19, 1925, age 57. Graduate of Cooper Medical College, California, 1893. Licensed in California in 1894. Doctor McConnell was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



ALBION WALTER HEWLETT

1874-1925

Doctor Hewlett was born in Petaluma, California, November 27, 1874, and died in the University of Pennsylvania Hospital, Philadelphia, November 10, 1925.

The family early moved to San Francisco. Our first indication of his later achievement is found in an old newspaper article which records his graduation from the

Oak Street School at the head of his class, although he was two years younger than the other members. First honors were again his on graduation from Johns Hopkins Medical School in 1900.

Internal medicine had already marked him for her own, for Dr. Hewlett rejected a surgical internship at the Presbyterian Hospital to accept a medical service at the New York Hospital. After a two-year internship he spent a year at Tubigen. A direct result of his work here was the translation of Krehl's Clinical Pathology. Indirectly, Krehl's influence led to studies which bore fruit in Hewlett's work on Pathological Physiology.

Dr. Hewlett was married in 1907 to Miss Louise Redington. Her sympathetic interest made possible a life of devotion to research, in addition to his clinical and teaching responsibilities.

On his return to the United States in 1906 he was attached to the staff of Cooper Medical College. In 1908 he was called to the chair of Internal Medicine at the University of Michigan, where he remained until his selection as Professor of Medicine in the Stanford University School in 1916. During the war he served overseas with the Stanford Base Hospital Unit, as Lieutenant Commander in the Medical Corps of the Naval Reserve.

Dr. Hewlett's research, with the exception of a few early papers, has been largely concerned with the physiology and functional pathology of the heart and circulation. The series of papers on the blood flow in the arm is perhaps most notable. His primary interest lay in the clinic, and his purely clinical papers cover a wide range of subjects. All his writing is distinguished by a sound conservatism in expressed opinion, and by a refreshing clearness and simplicity of style.

Dr. Hewlett's emotions interfered with his judgments far less than is common among us. The fallacies of his own most cherished prejudices—and those of his friends—were always quite as clear to him as were those of his opponents in discussion; and this resulted in a frankness and honesty which were at times almost amazing. Those who did not know the man may have sometimes interpreted this absence of emotional bias as an indication of an unsympathetic nature, but even a brief association never failed to demonstrate an unusual interest in the problems and enthusiasms of others. Those privileged with still closer friendship can testify to the deep loyalty of his affection.

In the death of Dr. Hewlett, Stanford University Medical School has lost an inspiring teacher; the medical profession has lost a resourceful leader; and medical research has lost an able, enthusiastic worker. H. G. MEHRTEHS.

Unperforated Ulcers of Terminal Ileum, Symptomatically Simulating Appendicitis—J. Shelton Horsley, Richmond, Va. (Journal A. M. A.), reports three cases that gave rather clear symptoms of appendicitis and yet were not appendicitis cases at all. They were cases of ulcer of the ileum, two of them being tuberculous. Horsley emphasizes this point: The surgeon who opens the abdomen for appendicitis should be prepared to deal with any condition that he may find. If the appendix is easily removable, the operation requires no great amount of skill; but if there is an ulcer of the duodenum, a diverticulum of the cecum, or some affection more serious than simple appendicitis, the life of the patient is in jeopardy unless the training of the surgeon enables him effectively to deal with these diseases. The obvious treatment for chronic ulcers of the terminal ileum is excision, and excision of an ileac ulcer usually means resection of the bowel.

"Certain professional moralists," said the Rev. Lloyd C. Douglas at the University of Michigan commencement exercises, "would have us believe that the blatant criticism of the movies may be held responsible for much of our moral turpitude which is, of course, arrant nonsense. The movies are not a cause of anything, but a natural effect; for the public has been nourished on the sentimentality of sentiment until only the rudimentary urges of undisciplined physical life remain sufficiently active to be stirred. The superheated fiction of the day, and the raucous squawk of the ubiquitous sex-a-phone are not causes of anything; they are the inevitable achievement of an age that has fed its emotions on red pepper until its jaded palate refuses to react to any dish unless served with nitroglycerine sauce and garnished with firecrackers."

Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President
W. R. CALDERWOOD, M. D.....President-Elect
FRANK B. STEELE, M. D., Salt Lake.....Secretary

Editorials by J. U. GIESY, Associate Editor for Utah

PETRA—THE ROCK

It is an old saying that the body of man is "founded upon a rock," and recent biochemic investigation and experimentation would seem, in a sense, to justify the old-time assertion literally, rather than figuratively—to show that we are builded upon a rock indeed. For, while not all rocks in the actual sense are of the same chemical formation, certainly lime enters into the chemistry of the formations known as rock to a vastly predominating extent. And the further research goes, the more are we faced by the importance in the body's chemistry of the element calcium.

Calcium balance seems, from all one can gather, to be the very foundation—the rock—of normal metabolism, with the other mineral salts grouped around it. Almost, present-day notions would appear to be a calcium dream. Yet results seem to show that it is no dream, but fact—and a fact which is opening up the doors to a better and more effective understanding of the internal chemistry and the necessary procedures to be instituted when there is a disturbed balance of this most important of all elements to be overcome.

Calcium in the blood in ionic or diffusible form seems to spell the difference between susceptibility to infection; to normal bone development; to the presence or absence of the colloid thyroid degeneration; to normal digestion, with its perversions, as tetany of deficiency origin, spasmophilia, convulsions of a myo-clonic type; to the development and healing of ulceration, to acute guanidin intoxication in infants, and the absence of all these. And the parathyroid gland seems to be the governor of calcium fixation and balance. What a wonderful thing the body in its silent function is. More and more, as we learn the true function and association of the endocrine chain, we will come to be able to play on the very keyboard of life and restore harmony for discord, and so give relief in dysfunction, imbalance, and disease. It is an inspiring thought—one to make the heart of the medical man beat a bit swifter, draw on some of his potassium, magnesium and calcium reserve, for very pride in what may come with the years. Calcium plus sunlight, natural or artificial, activating the blood-contained cholesterol, are already working wonders in the hands of capable men who understand their use. Rickets is being mastered, malnutrition is a condition recoverable in the major per cent. Old ulcerations heal—bronchial and peribronchial conditions yield and give the sufferer ease; anemias clear up and the erythrocytes increase, the whites drop, the blood iron comes up, restoring the true balance of health. Well, Solomon said there was nothing new under the sun, and the ancient Hebrews said man's body was built upon a

stone—and it begins to look as though both enunciations had been right.

THE PUBLIC TROUGH

For God knows how long a certain type of individuals have been trying to put over the trick of getting something for nothing. And sometimes they almost seem to get away with it. In reality, they do not. Nobody does. Always we pay one way or another. But the idea is firmly imbedded in the brains of a few that the trick can be worked.

We refer directly to those individuals who—able to pay for professional service—yet seek to take advantage of the free clinics established for the care of the indigent. If it were not so disgusting it would be rather bizarrely amusing to see these social pirates drive up to a free clinic in their limousines.

It is because of this abuse that recently the president of the Salt Lake County Society appointed a committee to wait on the candidates for election as City Commissioners and gain their views on the matter. It is refreshing to state that each and every candidate unhesitatingly went on record as opposed to this sort of thing.

And they should have—any honest person should. The free clinic is for the humanitarian relief of the sufferer who cannot pay. The person who seeks to get his feet in that sort of a public trough is no better than any other public thief.

POLLY PHAR MACY

Polly is a great girl. She's a sort of siren, not to say vamp. One might almost call Polly a prostitute and not be far from the mark. Polly is largely, we feel, to blame for the fact that prescription-writing is, in a way, to become a lost art.

We don't actually know how far the instruction in pharmacy and therapeutics goes these days in the modern medical college, but conversations had with recent graduates would indicate that it is more or less brief. And yet on therapeutics and its allied application in pharmacy the entire fabric of internal drug employment is based.

And there are only so many drugs—as yet—though what the synthetic laboratories may evolve in the future no one may state. The point we are trying to stress, however, is, that there are only so many chemicals which the tests of time and experience have proved. And that being the case, there are only so many chemicals which can be combined in a therapeutic fashion to produce a pre-judged effect upon disease. Consequently—and this is the crux of the matter—Whosis & Company's Compound, or Whyis Syrup, are each and all compounded of those self-same drugs.

Wherefore, it is rather weird to realize that we of a profession who rave because some lady patient confesses to having taken a bottle of Pydia Linkum's Female Restorative should show such a readiness to prescribe the compound put on the market by the Whosis Company, and never bat a lash as we gracefully sign our name at the bottom of the prescription sheet.

Yet wherein is there so great a difference between the frankly "patent" formula and the "proprietary" pharmaceutical? They are both stock formulas—

they are both pretty much shotguns. They are both certainly incapable of meeting the requirements of more than a certain percentage of individual cases, and they are both compounded from some of the definite number of known and well-tried drugs—drugs the physician should, of course, be familiar with both as to their therapeutic qualities and their indications before he becomes an accredited physician.

And here Polly once more gets in her work, because Polly is the goddess of polypharmacy, and "manufactured pharmaceuticals," like "patent medicines," are in the primary instance made to sell. Wherefore, when Whosis puts out their compound, Whyis and Whatfor and Thatsit, and Company all put out similar compounds to catch what they can of the sale while such compounds are the vogue. And each corporation sends out a flock of detail men to extol the merits of these similar combinations of tried and proved remedies and floods the physicians' mail with literature telling just what this particular compound does.

To the result that the physician prescribing this or that finds himself soon in the position of an unpaid member of the Whosis or Whatis Company's selling and distributing force. And the pharmacist has fifteen bottles on the drug-store shelf, each containing a similar compound marketed under a different but equally fancy name, instead of one bottle of a standard drug. And this, simply because Dr. Why or Dr. What, ad infinitum, each prescribes the same or practically the same thing under the particularly different name of each manufacturer's choice.

Ain't we the damned fools? Of course, the organic iron formulas are, some of them, nice to the taste. Some of these manufactured pharmaceuticals are not bad to take. Yet is "Egg-Iron," as one of the popular brands literally calls itself, or more liberally translated perhaps by intent Iron-Abluminate—any more efficacious really than the Syrup of the Iodide—Blauds—or the N. F. Iron Peptonate?

And isn't it rather time to ask ourselves why we should gratuitously help the manufacturing chemist to sing a paraphrase of Stevenson's oft-quoted lines:

Fifteen bottles on a drug-store shelf.

Yo, ho, ho, and the same stuff in every one!

Isn't it about time that we asked ourselves if it wouldn't be better for ourselves and our patients if we learned to use standard medicaments more and fit the prescription to the patient more exactly? In reality, a prescription should fit like a comfortable shoe or a well-tailored suit of clothes. The doctor's skill lies, of course, in making it fit. But that's the job of the shoeman, the tailor, or the doctor—or none of them has any job.

Isn't it about time that we gave more attention to the nearly lost art of prescription writing, and less to the advertising literature that floods the mails? The wastebasket is the place for most of the latter, and the waste-paper basket is the place for most of the stuff it is sent to advertise. That or the sink. Nowadays almost anybody who has a steady hand to pour from bottle to bottle, and the intelligence to lick a label, can be a pharmacist—insofar as the bulk of prescriptions are concerned. Ain't it the bunk?

Utah Notes (reported by J. U. Giesy)—Alfred Blumberg, Salt Lake, has been appointed to the staff of the United States Veterans' Hospital, Orten, North Carolina. Dr. Blumberg's duties will consist primarily of pathological and research work.

First Lieutenant Leo John Miltner, a physician at the Holy Cross Hospital, has been assigned to the Medical Reserve Corps of the 104th Division and attached to the 413th infantry.

A. A. Kerr, head of the Archaeology Department of the University of Utah, has returned from a trip through the southern part of the state, with three new relics to be added to the ethnological museum of the institution.

Under the direction of Major Samuel C. Gurney, chief medical officer for the 104th division, a school for Medical Reserve officers is being conducted in the offices of the United States Veterans' Bureau on the fifth floor of the Boston building, beginning at 8 o'clock. Meetings will be held every second and fourth Wednesday of each month during the winter.

The class work will consist of lectures and demonstrations on medical and military subjects.

Nearly 100 officers are eligible for the course, including 56 doctors, 24 dentists, 12 medical administrators, and 2 sanitary engineers.

Through the efforts of the parents and teachers of the Bear River City school, about ninety students have just been inoculated for diphtheria.

Ralph O. Porter, dean of the Utah Medical School, is back from the convention of the Association of American Medical Colleges recently held in Charleston, South Carolina. Doctor Porter inspected ten prominent schools of medicine while absent, and feels that the Utah school measures up creditably with any in the country.

J. J. Galligan is back from the convention of the American College of Surgeons at Philadelphia.

F. Leaver Stauffer, wife and family, are in Philadelphia, where the doctor is doing post-graduate work. They will remain for some five months.

F. B. Steel, secretary of the State Association, is in Chicago for a period of some three weeks. During his absence he will attend the meeting of the secretaries of the A. M. A.

Latest advices look favorable for the erection at Salt Lake of a United States General Military Hospital, to cover the necessary service to the ex-service and military men of the intermountain region. This is a long-felt need, and will serve an excellent purpose, as well as take advantage of a wonderful location, both climatically and as regards transportation facilities.

The editor wishes to apologize for the way the editorials in the October issue were printed. As far as he can judge, the compositor was either hopped up or else dropped the galley and pied the works. Parts of two separate editorials were scrambled together with little regard to sequence, and the results, as no doubt noted, were weird.

[Note—I wish to add my apology to that of Doctor Giesy for this blunder by the printers of our magazine.—W. E. Musgrave, Editor.]

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—October 12, 1925—President John L. Brown presided at the meeting held at the Commercial Club, Salt Lake City, Monday, October 12, with twenty-five members and two visitors present.

Applications for membership of H. W. Sherman and Leslie B. White were read and turned over to the board of censors.

H. P. Kirtly, reporting for the building committee, stated that land has been purchased and plans are being drawn up. The financial plan has been completed.

O. C. Ewing, former member, now of California, gave an address.

Francis W. Brown was elected to membership.

October 26, 1925—This meeting was held at the Commercial Club, with President John Z. Brown in the chair, and fifty members and one visitor present.

President Brown gave a short talk on medical ethics

and commended the California law relative to expert testimony.

Leslie B. White was unanimously elected to membership.

The program was limited to talks by three of the members who had recently been abroad; the first two speakers having been on the Inter-State Post-Graduate Tour.

E. F. Root confined his remarks chiefly to surgical subjects and gave a very interesting discussion on the surgical procedures he had witnessed in Canada, British Isles, and on the continent of Europe.

W. G. Schulte discussed the social aspects of the tour, and also the genito-urinary work he had seen in the visited countries.

C. G. Albaugh talked chiefly of his observations in Vienna. In addition to interesting medical subjects, he gave a very comprehensive insight into the economic conditions existing in the various continental countries.

Fred Stauffer reported for the building committee. He announced that wrecking of the old building had started, and urged more subscriptions so as to build a ten-story building instead of one of eight. E. F. Root emphasized Stauffer's remarks and told about the beautiful new medical building in Portland, Oregon.

Fred Peterson told about the cost of maintaining the emergency hospital and the tendency of people who are able to pay a physician to take advantage of the hospital. He urged that each person treated at the hospital be made to pay for the treatment, providing their circumstances were such as to allow it. He intimated that compensation cases were being sent there for first-aid treatment. There was further discussion of the existing conditions by A. C. Callister and John Z. Brown.

President Brown referred the matter to the Public Health and Legislation Committee for investigation, and appointed Fred Peterson on the committee temporarily in the absence of Chairman Sol G. Kahn. Fred Peterson moved that the president of the society act a third member of the committee in the absence of Chairman Sol G. Kahn and, further, that the committee interview the present Mayor and commissioners, and also the candidates for commissioners, as to their views on the conduction of the emergency hospital, and also that the society be circularized by cards not later than Saturday, October 31, 1925, which would give information as to the views of the present commissioners and the candidates for that office. President Brown suggested that Fred Peterson act with the committee. The motion was seconded and carried.

The committee acted promptly and submitted their report to the members of the society in a letter, which states:

"In accordance with motion passed at our last regular meeting, your Committee on Public Health and Legislation called on the candidates who are seeking the office of City Commissioner at next Tuesday's election.

All four candidates stated that they favor the city's making a reasonable charge for professional services rendered to people who are able to pay for the same."

To which Associate Editor Giesy adds this note:

"This is a very good idea—looking to the prevention of the taking of an undue advantage, by persons able to pay, of the free clinics—a thing which recently has been subjected to far too much abuse."

November 9, 1925—The regular meeting of the Salt Lake County Medical Society was held at the Emergency Hospital, Public Safety Building, Salt Lake City, Utah, on the above date. The meeting was called to order by President John Z. Brown. Sixty members and four visitors were present.

The secretary read the resolution passed by the Carbon County Medical Society November 8, 1925. No action taken.

The scientific program was arranged by City Health Commissioner Willard Christopherson. The first paper was by W. A. Pettit of the Department of Epidemiology on what his department hopes to accomplish.

The next paper was by M. J. Connelly, who discussed the inspection of milk, meat, and food.

The activities of the Venereal Clinic were discussed by E. Spencer Wright.

Walter L. Felt gave a short talk on the Baby Clinic and its management.

Evan Gillchrest told about the laboratory work and mentioned especially the water analysis.

J. J. Galligan gave a short talk on the Emergency Hospital and its management.

The last paper was by City Health Commissioner Willard Christopherson, who discussed the organization and the cost of maintaining the City Health Department. He told in detail about chlorinization of the water, and urged the society to back the department and to allay the idea prevalent among the laity that the chlorine is injurious to the health of the people. General discussion followed by F. S. Scott, L. J. Paul, A. A. Kerr, W. F. Beer, Earl Van Cott, C. M. Benedict, C. L. Shields, and S. H. Allen. Major S. C. Gurney, United States Army, mentioned his experience with chlorinization in the Philippines, and stated that he never observed a case of diarrhea due to chlorine.

President John Z. Brown announced the appointment of W. F. Beer on the Committee on Necrology.

Fred Stauffer reported the progress for the building committee.

Willard Christopherson announced that the Emergency Hospital and City Health laboratories were open for inspection, and he passed around cigars.

Nevada State Medical Association

A. J. HOOD, M. D., Elko.....President
HORACE J. BROWN, M. D., Reno.....Secretary and Associate Editor for Nevada

News Items From Nevada State Medical Association—The Nevada State Board of Medical Examiners met at Carson City, November 2 and 3, and held an examination of the following three medical doctors:

M. L. Herzig, formerly of Seattle, Washington.

E. L. Creveling, formerly of Jersey City, New Jersey.

H. C. Hill, formerly of Streator, Illinois.

The staff meeting of St. Mary's Hospital, Reno, is held on the second Monday of each month.

The Washoe County Medical Society meeting is held in the Chamber of Commerce at Reno on the second Tuesday of each month. Visiting doctors are welcome.

Charles W. Blake, formerly of Tonopah and later of New York City, is located in the Washoe County Bank Building, Reno.

M. L. Herzig is in the Baroni Building, Reno.

E. L. Creveling is located at 17 North Virginia Street, Reno.

H. C. Hill is located in the Fordonia Building, Reno.

C. E. Piersall is attending the annual conference of the secretaries of the Constituent State Medical Associations in Chicago.

Washoe County Medical Society (reported by Henry Albert, secretary)—October 13, 1925—A. R. DaCosta moved that we adopt the American Medical Association auto emblem as our official emblem. Carried.

J. L. Robinson demonstrated an electrical appliance for applying moist or dry heat to the neck, eye, etc.; also an appliance to heat paraffin which is sprayed on burned surfaces.

C. E. Piersall read a paper on galvanic therapy.

J. E. Pickard and A. R. DaCosta discussed and told interesting experiences with the galvanic current.

The meeting adjourned.

November 12, at the Y. M. C. A. building, President Vinton A. Muller presiding.

Minutes—The minutes of the previous meeting of October 13, were read and approved.

Business—President Muller presented a request from Mrs. S. H. Wheeler, secretary of the Child Welfare Division of the State Board of Health, that she be privileged to call on members of the society to occasionally address the nurses employed by that organization. By

vote, a majority signified their willingness to address the nurses.

An application from Dr. Herzig to join this society was presented and referred to the Board of Censors.

Program—Dr. G. L. Servoss presented a paper on "Diabetes and Common Sense." He emphasized especially the importance of making a determination of the dietary requirements of the individual before giving insulin. The paper was discussed by Drs. Albert and Pickard.

Dr. A. B. De Chene gave a report of the symptoms which she personally experienced while affected by the recent epidemic ailment attributed to the water supply.

The source of the toxic material which caused the recent water-borne epidemic of enteritis was discussed by Dr. Albert.

Attendance—Members: Albert, Blake, Caples, Da Costa, De Chene, Dalby, Fuller, Lehnars, Muller, Morrison, Pickard, Piersall, Richardson, and Servoss.

M. O. R. C.

Ninth Corps Area—California, Nevada, Utah, Wyoming, Montana, Idaho, Washington, Oregon, and the territory of Alaska.

Headquarters, Ninth Corps Area, has just issued orders assigning 222 Medical Reserve Officers to medical units and appropriate duties therein. This seems like a large number of doctors, but it is only one-sixth of the medical personnel that these same units require, and only one-tenth of the medical personnel required from the Ninth Corps Area under the National Defense Act. With these assignments, some of these units are taking on the appearance of organization. The general policy, in respect to such assignments, is to give a certain policy preference to units having priority of mobilization in the general defense plan.

The Surgeon, Ninth Corps Area, informs that mobilization plans in blank, have been completed by him and are in readiness to send out to the Commanding Officers of Medical Reserve Corps units as they accomplish a satisfactory organization for administrative purposes. The Commanding Officer merely has to enter certain data in spaces left blank for the purpose, and the document becomes a complete guide to prompt mobilization.

For consideration in connection with the mobilization plan thus completed, the Surgeon, Ninth Corps Area, has also prepared, and will send out to Commanding Officers, a reminder list showing each administrative step which should be taken, in its proper sequence, during the period of mobilization.

If such guides had been available during medical mobilization during the late war, a vast amount of inefficiency and delay would have been averted. Their availability now is merely an expression of one way by which the National Defense Act is operating in the prevention of similar difficulties in any future emergency.

To facilitate the development of the Medical Reserve Corps at large, and to give general aid in respect to the organization of its hospitals and other medical units, certain Reserve Medical Officers have been designated to act as local representatives of the Surgeon, Ninth Corps Area, within their respective geographical limits. These officers are supported by committees, of which they are chairmen. One other Reserve Medical Officer and the regular army Surgeon at the adjacent military post compose the remainder of each such committee.

These committees are:

For San Francisco and Northern California—Colonel George Franklin Shiels, Medical Reserve, 68 Post street, San Francisco, chairman; Major Sam F. Parker, M. C., Fort Winfield Scott.

For Los Angeles and Southern California—Colonel Charles W. Decker, Medical Reserve, 2417 W. Twenty-third street, Los Angeles, Cal., chairman; Major Val C. Miltenberger, M. C., Fort MacArthur.

The above named officers are prepared to assist the Medical Reserve Corps movement in every possible way. Members of the profession desiring commissions in the

Medical Reserve Corps would do well to consult them. Their advice and aid is available to officers already commissioned, in building up hospitals and other units into complete, well-rounded organizations, and in helping in every other way practicable.

Albert C. Carlton, Lieutenant-Colonel, Medical Reserve Corps, 177 Post Street, San Francisco, has just been awarded the Wellcome first prize of a gold medal and \$300 by the Association of Military Surgeons of the United States for the best essay on "The means and policies which will best enable this association to increase its membership and accomplish its patriotic objects as stated in its constitution." The competition was open to all medical officers of the Regular Army, Navy, National Guard, Organized Reserves, and Public Health Service.

The Association of Military Surgeons is an organization chartered by Act of Congress of the United States, and has now had an existence of some thirty-five years. It has a large membership in the militant medical services, and publishes a monthly journal—the "Military Surgeon"—which is a chronicle of current medico-military affairs and progress. Being of a national character, its annual meetings are habitually attended by medical officers of many foreign military and naval services, sent there as representatives of their respective governments. The winning of its annual prize brings much professional distinction to the successful essayist.

Evacuation Hospital No. 90, San Diego, Colonel Alfred E. Banks, Medical Reserve, commanding, is taking a leading position in interpreting the spirit of M. O. R. C. Service, and has now nearly completed its enrollment of officers and will shortly be placed on a mobilization basis, in readiness for emergency. Colonel Banks and the officers under him have gone ahead with the development of their unit in a very efficient way, and are now giving attention to the enrollment of their Reserve Nurse Corps personnel. Evacuation Hospital No. 90 made an excellent showing in the Preparedness Day parade. The officers of this unit now hold dinner conferences once a month for professional information, as well as for get-together purposes. At the dinner conference held on October 21, Lieutenant-Colonel Maynard C. Harding, Medical Reserve, and Major Clair L. Stealy, Medical Reserve, presented a formal plan for peacetime training within the unit. Lieutenant-Colonel C. Pennel Baxter, Medical Reserve, also delivered an address on medical administration pertaining to army hospital units. This was the first of a series of similar addresses for the benefit of the staff of Evacuation Hospital No. 90. The transactions at these meetings of the staff of Evacuation Hospital No. 90 regularly appear in the Bulletin of the San Diego County Medical Society.

The Sacramento Society for Medical Improvement, at its first meeting in September, went on record as being in favor of sponsoring the Reserve Medical Units assigned to Sacramento County. These units include Hospital Trains Nos. 44 and 71, and Medical Laboratories Nos. 1 and 4 (both aviation). It also directed its secretary to prepare a questionnaire to determine the possibility of providing the required medical personnel from within its own membership.

Colonel S. C. Baldwin, Medical Reserve, Salt Lake City, Utah, has been designated as liaison officer for Medical Reserve Corps affairs in the States of Utah and Nevada. Colonel Baldwin has been very active and successful in promoting Medical Reserve Corps affairs, and particularly in organizing General Hospital No. 61, which has the Latter Day Saints Hospital of Salt Lake City as its parent institution.

At the regular meeting of the Salt Lake County Medical Society of September 14, 1925, it was moved and carried that the society endorse the Medical Reserve units allocated to that county for home station, and that a committee be appointed to determine the best ways for the promotion of their interests. The units concerned are

General Hospital No. 61, Station Hospital No. 136, Hospital Train No. 1, and Veterinary General Hospital No. 54.

While the Reserve Corps of the Medical Department of the Ninth Corps Area is still far short of medical officers, the dental branch has not only filled all its vacancies in the Reserve Corps, but contributed a surplus of nearly 50 per cent beyond the requirements of the Ninth Corps Area plans.

The Medical Administrative and Sanitary Reserve Corps have likewise filled their quota. Most of the quartermasters and chaplains needed to further officer the Reserve Corps hospitals have already been obtained, and the few vacancies remaining will shortly be filled.

Only the medical profession has failed to measure up to its responsibilities. The personnel of Medical Reserve Officers enrolled is not half as large as it should be. Yet the whole plan of Reserve Medical Service, and the operation of its medical units, is built about the medical profession.

Why is it that the medical profession has lagged behind, when the other branches that work with it in its patriotic and humanitarian mission have gone "over the top"?

MORE NAMES TO THE HONOR ROLL

The following are the Reserve Medical Officers already appointed to command Reserve Medical units in California. There are some other medical units, for which no selection of Commanding Officers has as yet been made:

Colonel Alfred E. Banks, Med. Res., 723 Electric Building, San Diego, Evacuation Hospital No. 90.
Colonel Harry G. Ford, Med. Res., 2345 Lake Street, San Francisco, Evacuation Hospital No. 88.
Colonel Henry H. Lissner, Med. Res., c/o Union Bank and Trust Co., Los Angeles, General Hospital No. 35.
Colonel James A. Mattison, Med. Res., Soldiers' Home, Sawtelle, General Hospital No. 142.
Colonel Howard C. Naffziger, Med. Res., 2555 Larkin Street, San Francisco, General Hospital No. 20.
* Colonel John W. Shiels, Med. Res., 291 Geary Street, San Francisco Headquarters Ninth Corps Medical Service.
Lieutenant-Colonel Charles L. Garvin, Med. Res., Box 83, Livingston, Station Hospital No. 139.
Lieutenant-Colonel Morton R. Gibbons, Med. Res., 3979 Washington Street, San Francisco, General Hospital No. 138.
Lieutenant-Colonel Charles D. Lockwood, Med. Res., 295 Markham Place, Pasadena, Surgical Hospital No. 71.
Lieutenant-Colonel Levi L. Riggin, Med. Res., 205 Dodworth Building, Pasadena, Surgical Hospital No. 72.
Lieutenant-Colonel Fred C. Shurtleff, Med. Res., 709 Brockman Building, Los Angeles, Station Hospital No. 150.
Lieutenant-Colonel Charles T. Sturgeon, Med. Res., 1136 West Sixth Street, Los Angeles, Evacuation Hospital No. 81.
Lieutenant-Colonel Neal N. Wood, Med. Res., 1100 Mission Road, Los Angeles, Station Hospital No. 144.
Major Walter A. Bayley, Med. Res., 1216 West Forty-eighth Street, Los Angeles, Surgical Hospital No. 67.
Major Arthur N. Bobbitt, Med. Res., 411 Citizens Savings Bank Building, Pasadena, Medical Laboratory No. 11.
Major Peter D. Obarrio, Med. Res., 1217 Sherman Street, Alameda, Medical Laboratory No. 1.
Major Joseph F. Grant, Med. Res., 4483 Hermosa Way, San Diego, Medical Laboratory No. 5.
Major David H. Keller, Med. Res., Old Colony Club, Los Angeles, Hospital Train No. 55.
Major Joseph G. Noble, Med. Res., U. S. V. Hospital No. 64, Camp Kearney, Hospital Train No. 71.
Major John H. Woolsey, Med. Res., University of California Hospital, San Francisco, Surgical Hospital No. 65.

* Assigned as Corps Surgeon. (No C. O. authorized.)

Assignments and Changes in Personnel—California, Utah and Nevada

Presidio of San Francisco, Cal., October 20, 1925.

The following named Reserve Officers are assigned to the unit as indicated below, and to the positions as indicated after their respective names:

General Hospital No. 140, Zone of Interior:

Lieutenant-Colonel John M. Lacey, Med. Res., 1052 West Sixth Street, Los Angeles, Calif., as Commanding Officer.
Lieutenant-Colonel Walter F. Wessels, Med. Res., 254 South Gramercy Place, Los Angeles, Calif., as Chief of Medical Service.
First Lieutenant Clayton R. Johnson, Med. Res., 2409 South Bronson Avenue, Los Angeles, Calif., as Roentgenologist.
Captain Harry E. Straub, Dent. Res., 1743 Micheltorena Street, Los Angeles, Calif., as Dental Surgeon.
Eighty-first Evacuation Hospital, Third Army:
First Lieutenant Walter E. MacPherson, Med. Res., 1100 Mission Road, Los Angeles, Calif. (temporary address, 946 E Street, Sparks Nev.), as Surgical Ward Officer.
First Lieutenant David A. Schmid, Med. Res., 1008 Por-

ter avenue, San Fernando, California, as Surgical Ward Officer.

Sixty-seventh Surgical Hospital, Third Army:

First Lieutenant Clarence W. Giegerich, Mar. Res., 627 Acacia Street, Glendale, Calif., as Registrar, C. O. Detachment of Patients.

Eighty-eighth Evacuation Hospital, Sixth Army:

The following-named Reserve Officers are assigned, as indicated:

Major Raymond A. Babcock, Med. Res., Main and Commercial Streets, Willits, Calif., as Assistant to Chief of Medical Service.

Major Francis S. Cook, Med. Res., Brentwood, Contra Costa County, Calif., as Assistant to Chief of Medical Service.

Major William J. Hosford, Med. Res., 57 Nevada Street, Santa Cruz, Calif., as Assistant to Chief of Surgical Service.

Major Irving W. Higgins, Med. Res., Live Oak, Calif., as Roentgenologist.

First Lieutenant Elmer F. Prescott, Mar. Res., 676 Mission Street, San Francisco, Calif., as Adjutant and Assistant Fire Marshal.

Major Orrin S. Cook, 749 Twentieth Avenue, San Francisco, Calif., as Roentgenologist.

First Lieutenant James P. Warren, Mt. Zion Hospital, San Francisco, Calif., as Medical Ward Officer.

First Lieutenant Otto L. Schattenburg, Mt. Zion Hospital, San Francisco, Calif., as Medical Ward Officer.

Major Clark L. Abbott, Med. Res., 126 Santa Fe Avenue, Point Richmond, Calif., as Assistant to Chief of Surgical Service.

First Lieutenant Harold L. Fraser, Med. Res., 939 Adeline Street, Oakland, Calif., as Medical Ward Officer.

First Lieutenant Henry P. Buckingham, Med. Res., 3902 California Street, San Francisco, Calif., as Surgical Ward Officer.

First Lieutenant Jack L. Stein, Med. Res., 2210 Los Angeles Avenue, Berkeley, Calif., as Medical Ward Officer.

First Lieutenant Carlyle M. Pearce, Med. Res., 2307 Bartlett Street, Oakland, Calif., as Medical Ward Officer.

First Lieutenant Frank K. Haight, Med. Res., 1283 Second Avenue, San Francisco, Calif., as Surgical Ward Officer.

Major Arthur E. Irving, Dent. Res., Box 22, Kelseyville, Calif., as Dental Surgeon.

First Lieutenant Ernest R. Ker, Dent. Res., 354-356 Flood Building, San Francisco, Calif., as Dental Surgeon.

First Lieutenant Tiberius B. Molsbergen, Mar. Res., 900 Sierra Street, Reno, Nev., as Registrar and C. O. Detachment of Patients.

Second Lieutenant Harry L. Bradley, Mar. Res., 1014 Clay Street, Oakland, Calif., as Detachment Commander.

The following-named Reserve Officers are relieved from their present assignment and are assigned as indicated:

Colonel Frank C. Wiser, Med. Res., 161 South Normandie Avenue, Los Angeles, Calif., from assignment to the 349th Medical Regiment, Nineteenth Corps, and assigned to General Hospital No. 144, Zone of Interior, as Commanding Officer.

Lieutenant-Colonel Fred C. Shurtleff, Med. Res., 709 Brockman Building, Los Angeles, Calif., is relieved from assignment to Station Hospital No. 150, Communications Zone.

The following-named Infantry Reserve Officers are relieved from assignment to Corps Headquarters Company, Nineteenth Corps:

Captain John L. Cogan, El Centro Apartments, Alameda, Calif.

First Lieutenant Chester A. Fee, P. O. Box 2785, Taft, Calif.

First Lieutenant Edward C. Schumacher, Ross Fire Department, Ross, Calif.

The following-named Infantry Reserve Officers are assigned to Corps Headquarters Company, Nineteenth Corps:

Captain Tom Barker, 1216 Mission Street, San Francisco, Calif.

First Lieutenant Harry Brown, 1709 Hayes Street, San Francisco, Calif.

First Lieutenant Joseph S. Flynn, 5026 Geary Street, San Francisco, Calif.

Second Lieutenant Robert M. Apple, 648 Waller Street, San Francisco, Calif.

Lieutenant-Colonel Neal N. Wood, Med. Res., 100 Mission Road, Los Angeles, Calif., is relieved from assignment to Station Hospital No. 144, Communications Zone.

The following-named Medical Corps Reserve Officers are assigned to units as indicated:

Major Ernest W. Cleary, 146 Chapin Lane, Burlingame, Calif., to Eighty-eighth Evacuation Hospital, Sixth Army, as Assistant to Chief of Surgical Service.

Captain William F. McCool, 1026 Marsh-Strong Building, Los Angeles, Calif., to Ninetieth Evacuation Hospital, Sixth Army, as Evacuation Officer.

Captain Irvin H. Betts, 411 West Grove Street, Visalia, Calif., to Sixty-fifth Surgical Hospital, Third Army, as Assistant Operating Surgeon.

First Lieutenant John O'hannesson, Mt. Zion Hospital, San Francisco, Calif., to Eighty-eighth Evacuation Hospital, Sixth Army, as Surgical Ward Officer.

First Lieutenant Lewis A. Alesen, 1675 West Santa Barbara Avenue, Los Angeles, Calif., to Eighty-first Evacuation Hospital, Third Army, as Medical Ward Officer.

The following-named Reserve Officers are assigned to the unit as indicated, and to the positions as indicated after their respective names:

General Hospital No. 46, Communications Zone:

Major Rossner E. Graham, Med. Res., 230 Grand ave., Oakland, Calif., as Assistant to Chief of Medical Service.

General Hospital No. 47, Communications Zone:

Lieutenant-Colonel Howard W. Seager, Med. Res., 749 South Berendo Street, Los Angeles, Calif., as Chief of Medical Service.

Major Joseph A. Parks, Med. Res., Lee Avenue, La Mesa, Calif., as Assistant to Chief of Medical Service.

Major Lambert B. Coblenz, Med. Res., 205 West Chapel, Santa Maria, Calif., as Assistant to Chief of Surgical Service.

Major Thomas C. Myers, Med. Res., 1501 South Figueroa Street, Los Angeles, Calif., as Assistant to Chief of Surgical Service.

General Hospital No. 138, Zone of Interior:

Major Sydney V. West, Med. Res., 304 Broadway, Chico, Calif., as Assistant to Chief of Surgical Service.

First Lieutenant Morrell E. Veckl, Med. Res., University of California Hospital, San Francisco, Calif., as Surgical Ward Officer.

First Lieutenant Percy B. Gallegos, Med. Res., Lane Hospital, San Francisco, California, as Surgical Ward Officer.

NEWS ITEMS FROM THE CALIFORNIA BOARD OF MEDICAL EXAMINERS

C. B. PINKHAM, M. D., *Secretary*

A new method for treatment of paralysis was disclosed in the recent arrest of Jean Campbell, San Diego, California, who is reported to have mulcted a hopelessly paralyzed patient out of \$108 under the theory that, by tickling the patient's nostrils with odd pieces of paper, the patient would be caused to sneeze and thereby relieve the pressure on the brain that caused the paralysis.

A flight into high finance was disclosed in the arrest of E. A. Mitchell, an interior decorator, charged in Los Angeles with violation of the Medical Practice Act. He is alleged to have made physicians and sold them "territory" wherein to work. Another venture was selling certificates for life-time service in the Los Angeles County Hospital. Mitchell is reported to have received \$200 cash in advance for treating an 11-year-old diabetic patient whose trouble he diagnosed as dropsy of the lungs. Following his conviction he was sentenced to ninety days in the county jail.

Since filing of a complaint, the Bakersfield police are reported looking for "Dr." Harley Hulse Heddens on a charge of violation of the Medical Practice Act. His philosophy is expressed on the front page of his record book. "On the plains of hesitation bleach the bones of countless millions who at the time of victory sat down to wait and, waiting, died." Not so with Heddens, who did not "tarry long on the plains of hesitation. The minute he found the police didn't have a good tight grip on him he was off." According to reports, he collected \$1688.55 in the period between June 7 and December 31, 1924, and \$507.25 from January 1, 1925, to April 18, 1925, in his illegal practice of medicine. Many ergot prescriptions were reported given his women patients, and many are reported to have paid either \$35 or \$50 for an operation. No one by the name of H. H. Heddens can be found as licensed to practice medicine in any state or territory of the United States, nor can a record of him be found with the Board of Osteopathic Examiners or the Board of Chiropractic Examiners. P. F. Collier & Son report the delivery to Heddens of a set of "Harvard Classics," representing \$110, for which they have not been paid in full.

Behind the cloak of the Chirothesian Church of Faith are hiding many of those engaged in violation of the Medical Practice Act, some of the more recent ones being M. T. Larkin, Los Angeles; Josephine M. Fernald, Los Angeles; and Allen Mills, Richfield, Tehama County, California. The proponents of this organization have declared that they will make the ordination certificate of the Chirothesian Church of Faith equally recognized with a medical diploma. The recent conviction of Chirothesian Allen Mills for violation of the Medical law has been upheld by the Appellate Court.

Jacob Nilmeier, terming himself "bone specialist," again charged with violation of the Medical Practice Act in Fresno on April 29, 1925, has not as yet been given preliminary hearing.

Just why the authorities of Monterey County seem loath to bring to trial in the Superior Court "Dr." Christopher (Charles) Liscum, held for trial by the Justice Court at Castroville early this year, is a matter of no little importance. Liscum came to California after Oregon newspapers had related his arrest on a bootlegging

charge, his asserted conviction of driving an auto while intoxicated; and a term in the federal penitentiary on McNeil's Island, following his conviction of violation of the Harrison narcotic law. While here he is reported to have been placed under supervision of the probation officer for failure to provide for a minor child. *What's the matter in Monterey County?*

Following the filing of a complaint by the energetic law enforcement officials of Modesto, charging N. S. Sue, Chinese herbalist, of violation of the Medical Practice Act, the defendant recently pleaded guilty and paid a fine of \$400.

Nelford B. Hollingsworth, a professed divine healer, recently pleaded guilty in Los Angeles of violation of the Medical Practice Act. He evidently could not pray hard enough, as in addition to prayer he used massage, alcohol rubs, and fig pills.

Susan E. Davis, alleged to have been carrying on rather an extensive practice, pleaded guilty in Bakersfield to a violation of the Medical Act and paid a fine of \$100.

J. Lafayette Berry, who, according to the records formerly conducted a traveling tent show under the name of "Bloodless Berry," and the revocation of whose license October 21, 1919, has been sustained by the California courts, was recently charged in Los Angeles County with violation of the Medical Practice Act in connection with the treatment of one suffering from cancer of the face, the report stating "there is now a hole in the patient's cheek which apparently cannot be healed."

James R. Dow, whose medical training, according to his reported admission, consisted in acting as a "bell boy," and later a nurse at Bellevue Hospital, New York, recently pleaded guilty in Los Angeles on a charge of violation of the Medical Practice Act and was given a ninety-day jail sentence, suspended for a period of two years on condition that he refrain from further violation.

A recent report from Ventura County that the body of an infant, dying shortly after birth attended by an unlicensed midwife, the poor little body crushed down into a macaroni box for a coffin, neither birth nor the burial having been reported to the authorities, makes us realize our problem in handling maternity work among our foreign population.

William A. Strole, M. D., of Los Angeles recently pleaded guilty to a violation of the Harrison Narcotic Act in the United States Court, Southern District, and paid a fine of \$500.

Recent press dispatches relate that the State Board of Chiropractic Examiners is engaged in investigation of alleged trafficking in chiropractic diplomas by certain California institutions.

Percy Purviance, proprietor of the Berkeley Chiropractic High School and the Berkeley College of Chiropractic, according to reports has been cited to appear before the Chiropractic Board on November 5, 1925, to show cause why his license, alleged to have been obtained through "fraud and deception," should not be revoked.

The Sacramento Bee of September 17, 1925, relates T. Wah Hing, Chinese herbalist, has been indicted by the Grand Jury, it being charged "that Hing has treated various patients, acting in the guise of a physician, without being the possessor of a diploma from an accredited medical college, and without having passed the examination prescribed by law." Hing has conducted an office in Sacramento for many years, and on more than one occasion has been charged with violation of the Medical Practice Act, as well as the state poison law, in connection with narcotics.

L. T. A. Hotten, also known as Hottendorf, was recently charged in Los Angeles with selling narcotics to patients, according to Los Angeles papers.

Dio Lewis, reported to have wandered about the parks of Los Angeles operating on corns—sharpening his instruments on his shoe—was recently sentenced to 180 days in jail by Police Judge Richardson in Los Angeles for violation of the Medical Practice Act. An infection following Lewis' operating is said to have caused one of his "patients" considerable trouble.

According to the Los Angeles Examiner of September 5, 1925, J. J. Hansen, licensed chiropractor, was held on a charge of performing operations, for which he was unqualified. Following his plea of guilty, he was sen-

tenced to pay a fine of \$100 or serve 100 days in the county jail.

Christine Stewart Loose, Oakland, was recently charged with murder in connection with the death of Charlotte Sweet, following an alleged criminal abortion. She is referred to as a retired physician and surgeon, but no record of her medical credentials has been found.

James A. McLean, native of Martinique, self-asserted geologist, evolutionist, pathologist, psychologist, anatomist, biologist, chemist, etc., was recently charged in San Francisco with violation of the Medical Practice Act. According to newspaper reports he claims to be able to turn the sun's rays directly into alcoholic beverages.

Arthur E. Pike, D. O., Mayor of Signal Hill, Long Beach, California, was reported recently charged with violation of the Medical Practice Act by the investigator for the Board of Osteopathic Examiners.

M. A. Crespo, self-styled medical man and occult Messiah, forfeited \$1000 bail, following the Los Angeles Superior Court's affirmation of his sentence to pay a fine of \$200 and serve 120 days in the county jail on a charge of violation of the Medical Practice Act.

CORRESPONDENCE

To the Editor:

In CALIFORNIA AND WESTERN MEDICINE for November, 1925, on page 1465, we notice an announcement of the Colloquia at the San Francisco Hospital. May we call your attention to the fact that the Surgical Colloquium is held on Thursday instead of Tuesday, as stated in this account, and the Medical Colloquium is held on Friday.

W. OPHULS, Dean.

[In correcting the error we wish to repeat that brief extracts of the discussions at these colloquia make profitable reading for doctors everywhere.—EDITOR.]

To the Editor:

Is Christian Science harmless? Let us see! A few days ago one of our architects came into my office. His eye fell upon a pamphlet lying on my desk, on the cover of which was printed in large type the word "diabetes." He said, "That makes me sad." I said, "Why?" He said: "I had an excellent office assistant—a very bright and capable young woman, a graduate of the University of California; she developed diabetes. I pleaded with her to avail herself of the benefits of modern medicine, including insulin. She went to Christian Science. I continued to plead with her. She told me to cease, as it was interfering with her 'treatment.' I desisted. Her practitioner told her to pay no attention to diet; eat anything she wanted; only keep her mind fixed on the teachings of Christian Science." "One Saturday afternoon," he continued, "I helped her to the ferry. Two days later she died." To tell a diabetic to disregard diet is like pouring coal oil on a fire.

Another case, somewhat less well authenticated, however: One of our prominent businessmen contracted pneumonia. Again Christian Science was invoked. Later, when the footsteps of approaching death became audible to the dull ear of the practitioner, the unfortunate patient was hurried away to a hospital to die and to have his death certificate signed by a physician.

No physician should ever sign a death certificate under such circumstances. The case should be sent to the coroner, so that his verdict may place the responsibility where it belongs. We should set our faces hard against this thing. No sooner is the victim of their criminality safely buried by the courtesy of our profession, than they turn upon us and assert that it was a medical death; they had nothing to do with it.

Such incidents as I have related above are going on all about us. The extent of it we are unable to comprehend.

They are becoming sufficiently powerful to intimidate the public press. With the press paralyzed they may attempt to lay their hands upon our government. They now aspire to control legislation. Once armed with the full power of the state, it would be difficult to overestimate the harm they would do the world.—J. A. S., M. D.

NEXT YEAR, IN CALIFORNIA AND WESTERN MEDICINE

CALIFORNIA AND WESTERN MEDICINE has accepted for publication in forthcoming numbers the following essays, which will be published during the coming year as suitable space is available:

- Samuel Ayres, Jr.
Present Status of Bismuth in Anti-Syphilitic Treatment.
- William H. Barnes.
Virulent Surgical Infections.
- Dean Blake.
Some of the Functions of Humidity.
- W. W. Boardman.
Cholecystography—Its Value as a Diagnostic Procedure.
- Emil Bogen.
Recent Studies in Scarlet Fever.
- Andrew Bonthius.
Clinical Aspects of Intestinal Protozoiasis.
- LeRoy Brooks.
A New Technique of Unmodified Blood Transfusion.
- Ernest M. Burns.
Vincent's Infection—Its Significance as a Precursor of Pyorrhea and Possibilities as Cause of Other Diseases.
- H. E. Butka.
Infectious Mononucleosis, With Report of Five Cases.
- Edmund Butler and G. D. Delprat.
Intestinal Obstruction.
- Lenore D. Campbell.
Giant Cell Tumors not Connected to Bones.
- Burns Chaffee.
Progress of Treatment for Hypertrophic Stenosis of the Pylorus.
- Thomas J. Clark and Frank H. Stibbens.
Skin Diseases in Twins.
- Fred B. Clarke.
Lupus Erythematosus Acutus Disseminatus.
- Harry Theodore Cooke.
Antagonistic Functions of the Uterus in Relation to Regional Nerve Blocking.
- E. F. F. Copp.
Effects of Insulin Treatment on Experimental Diabetes of Dogs.
- Michael Creamer.
Menorrhagia of Unusual Etiology.
- Wilson T. Davidson.
Diagnosis of Chronic Amebiasis.
- Paul J. De River.
Present-Day Advance in Plastic Surgery, With Reference to Correction of Deformities of Nose.
- Henry Dietrich and Hugh K. Berkley.
Mongolian Idiocy.
- Arthur N. Donaldson.
Relation of Protein Foods to Hypertension.
- John B. Doyle.
The Recognition of Psychoneuroses.
- D. M. Ervin.
Edema With the Use of Insulin.
- Newton Evans and Philip J. Tunnell.
Differential Leucocyte Count in Acute Inflammatory Conditions of Surgical Importance.
- Fred R. Fairchild.
Surgical Judgment.
- Franklin Farman.
Operative Treatment of Rupture of the Male Urethra.
- Paul A. Ferrier.
Urethral Carbuncle.
- Kendal P. Frost.
Syphilis in Pregnancy.
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Favus.
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Speech Defects and Disorders.
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Clinical Significance of Bundle Lesions.
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Report on Fifty Cases of Diabetes Treated With Insulin.
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- Verne C. Hunt.
Suprapubic Prostatectomy.
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The Role of Cesarean Section in the Treatment of Eclampsia.
- H. P. Jacobson.
Treatment of Herpes Zoster.
- Clarence A. Johnson.
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Industrial Liability for Cancer.
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The Intravenous Use of Sodium Cacodylate Mercuriochrome—220 Soluble, etc., in Malignant Endocarditis.
- Charles G. Levison and Mast Wolfsohn.
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In preparing the index to this volume, we have followed the method of an alphabetical subject and author index combined. It is not as full perhaps as it should be, because it would take most of the time of an indexing secretary to prepare as complete an index as we would like to see. However, it is full enough so that any major subject discussed during the year and the names of all authors may be readily located.

An ever-enlarging circle of physicians who read systematically are finding the Cumulative Index published quarterly by the A. M. A., and sold for a nominal subscription, of incalculable value. Everything published in CALIFORNIA AND WESTERN MEDICINE, as well as all other worthwhile medical magazines, is completely indexed in the "Cumulative" in a most complete author and subject index. Our editorial staff use this volume constantly.—EDITOR.

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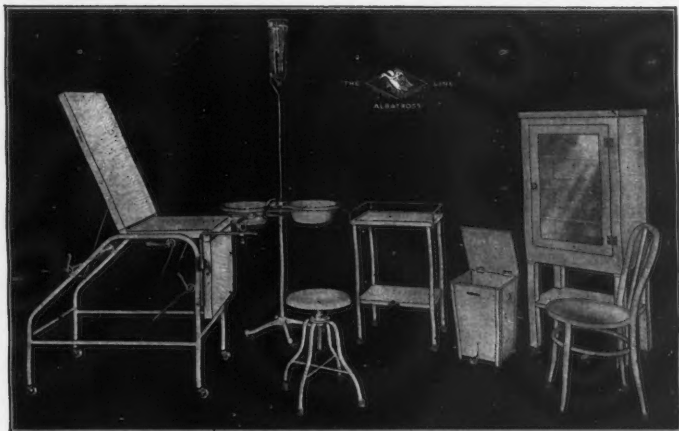
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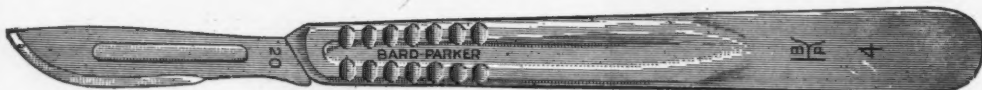
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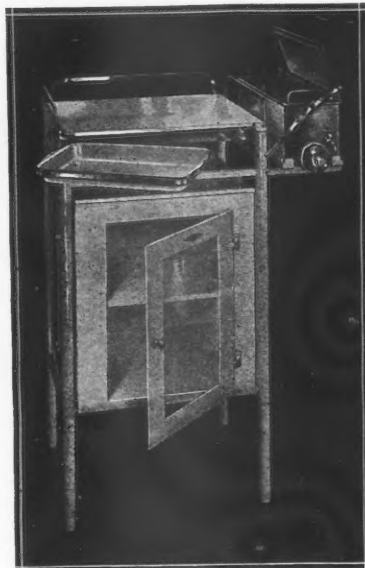
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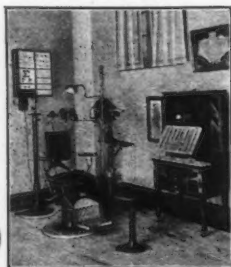
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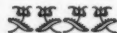
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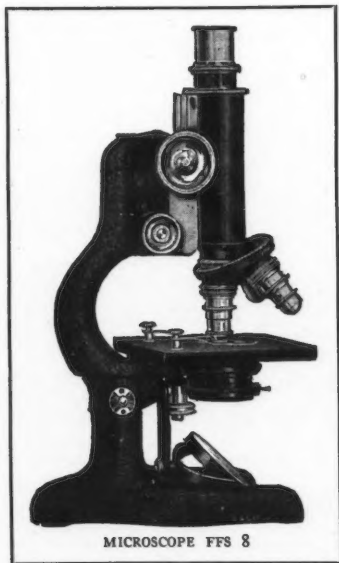
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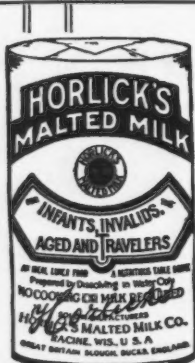
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comments, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

Pseudo-Appendicitis. A study of mechanical syndromes of the right lower quadrant simulating appendicitis. By Thierry De Martel and Edouard Antoine. 211 pp. Illustrated. Review copy by courtesy of F. A. Davis Company. For sale by advertisers in California and Western Medicine.

That there is need for such a book as this, is evident from the many recent articles dealing with a so-called chronic appendicitis and the poor results of insufficient surgical treatment.

The authors stress the importance of caution in dealing with patients complaining of chronic discomfort on the right side of the abdomen associated with gastrointestinal disturbances and tenderness. Too often is such a combination of signs and symptoms hastily diagnosed as appendicitis, the appendix removed, but the patient not benefited.

Recurring symptoms referable to pathological conditions in the right flank and iliac fossa—the cecum and proximal colon—should warn against superficial methods of study. It is only by making use of all diagnostic measures available, including the "co-operation of a good internist, a good radiologist and a good surgeon," that the true condition will be determined and the proper treatment realized.

The subject is well treated in this book. The nature of pathologic changes in and about the cecum and ascending colon is presented in the introduction. These changes are studied and their effects developed clearly in the several chapters of the book.

The writers emphasize especially the importance of complete radiologic study of the entire gastro-intestinal tract, not, however, to the exclusion of data derived by any or all other means of diagnosis. The underlying cause in all cases cited in the book is a mechanical one resulting in greater or less interference with the normal march of the content of the cecum and adjoining colon.

The book is interestingly written. The authors have a message and make their points clear. Not only surgeons, but internists as well will benefit by its study.

(Continued on Page 1636)

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BOOK REVIEWS

(Continued from Page 1632)

Some Fundamental Considerations in the Treatment of Empyema Thoracis. By Evarts A. Graham. Review copy by courtesy of C. V. Mosby Company. For sale by advertisers in California and Western Medicine. Price, \$2.50.

This book will interest surgeons occupying themselves with diseases of the chest. It gives experiments on the pneumothorax and formulates a scientific theory for the dangers of early operations in post-pneumonic empyema. The reviewer's practice has been to defer operation whenever dyspnea and cyanosis seem greater than might be accounted for by the rise of the exudate; he has assumed that the excessive dyspnea and cyanosis were caused by the underlying pneumonia, and has waited. Graham's book gives experiments and a scientific explanation for the clinical formula expressed above.

Clinical Therapeutics. By Alfred Martinet. Two volumes. Review copy by courtesy of the publishers, F. A. Davis Company. For sale by advertisers in California and Western Medicine.

Particularly interesting is the first volume of this work bearing on therapeutic agents and procedures. It is quite comprehensive and most descriptive. Accounts of procedures are here from the simplest and oldest, such as the seton, to artificial pneumothorax and the use of Bayeux' oxygenator.

The second volume on the treatment of symptoms and diseases is less attractive, containing little that cannot be found in innumerable sources. Nevertheless, all is in brief enough form and still comprehensive. The style is satisfactory and the print excellent. Our reviewer finds it difficult to acquire knowledge by examination of tables such as abound here.

Methods in Surgery, used in the surgical divisions of Barnes Hospital, St. Louis Children's Hospital, and Washington University Dispensary. By Glover H. Copher. Review copy by courtesy of C. V. Mosby Company. For sale by advertisers in California and Western Medicine. Price, \$3.

A manual for the surgical house officers and interns at Washington University. It gives a good idea of the exemplary organization with which Dr. Evarts Graham manages his services.

Medical Follies. By Morris Fishbein, M. D., Editor of the Journal of the American Medical Association. Review copy by courtesy of the publishers, Boni & Liveright. For sale by advertisers in California and Western Medicine.

In reviewing this well-written book we cannot do better than to quote, with our endorsement, from its review by that interesting and worthwhile weekly newspaper

(Continued on Page 1642)

The Management of an Infant's Diet

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A Comparison of Dried, Evaporated, and Fresh Cow's Milk—In this experiment rats were fed on a diet of white bread (crumb only) mixed with (1) fresh cow's milk, (2) dried milk, or (3) evaporated, non-sweetened milk. Throughout the study it was found that the rats fed on evaporated milk were in poorer condition than those fed on either fresh cow's milk or dried milk. It was obvious that dried milk and evaporated milk possess quite different dietetic values, and that dried milk approximates more closely to fresh cow's milk. Experiments previously reported prove that the content of vitamin B is greater in dried milk than in evaporated milk. The dried milk used was apparently quite equal in dietetic value to fresh cow's milk; if there was any advantage it was in favor of the dried milk. The evaporated milk used, however, compared less favorably with fresh cow's milk.—Gladys Annie Hartwell (British Medical Journal, June 13, 1925).

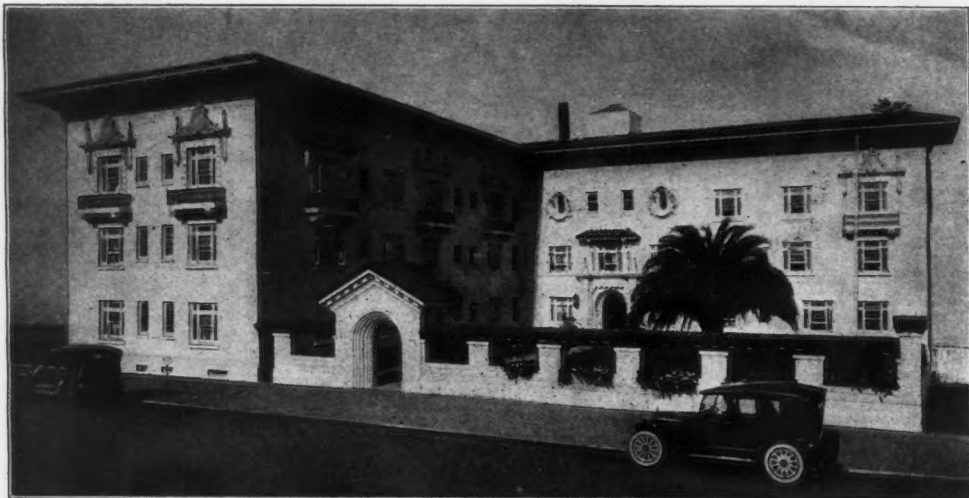
The Pathology of Peptic Ulcer of the Stomach—Howard T. Karsner, Cleveland (Journal A. M. A.), reviews extensively the literature and concludes that, pathologically, peptic ulcer is an inflammatory—perhaps primary—lesion so situated that gastric juice probably emphasizes the destruction of tissue. Various predisposing causes seem to be operative in the patients, but these are not conclusively established. The direct exciting cause of the ulcer has not yet been disclosed in such a fashion as to be beyond doubt. The persistence or chronicity of the ulcer depends on a variety of factors, none of which can be said to operate in all cases. Probably several of these factors are coincidentally in evidence. Thus, there must be considered especially hyperacidity, stasis of neuro-muscular or obstructive origin, the irritative and traumatic influence of gastric contents, and the traction of muscle about the ulcer.

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BOOK REVIEWS

(Continued from Page 1636)

"Time," edited and published by laymen. The book review editor of this magazine says in part:

"Few laymen read medical journals, for they inevitably suspect, behind the lurch and trundle of ill-teamed words, the machinations of a cloudy mind." Dr. Fishbein's words are graphic; he is possessed of what George Meredith called "the first condition of sanity"—a belief that our present civilization is founded on common sense. In a new book he shows what a neat and glittering weapon this common sense may be. With it he clips down major medical follies—osteopathy, chiropractic—and passes on to offer information on various other topics.

Objective Psychopathology. By C. V. Hamilton, M.D., Director of Psychological Research, Bureau of Social Hygiene, Inc. Review copy by courtesy of the publishers, C. V. Mosby Co., St. Louis. For sale by advertisers in this issue.

A careful reading of this book confirms Hamilton's intellectual honesty and scholarly attainments. The book will be appealing to intelligent people generally no doubt, but being tinged with reminiscences of Psychopathia Sexualis, the expediency of its circulation, as recommended among social workers and other laymen is doubtful, although the prurient-minded may find an outlet for their tendencies at any news-stand. Hamilton is to be complimented upon his successful attempt to avoid confusing nomenclature and terms which are often piled one upon another in psychological studies, and also upon his new idea of dealing with the reactive tendencies of the organism as physical, objectively measured things. Hamilton's book will be of great value to the physician and surgeon who already possesses his insight into such matters and who may not be as ignorant of them as those mentioned by Professor Robert Yerkes in the foreword of the book.

Personal Hygiene Applied. By Jesse Feiringer Williams. Review copy courtesy of W. B. Saunders Co. For sale by advertisers in California and Western Medicine.

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(Continued on Page 1652)



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Secretary, J. H. Woolsey, Medical Bldg., 909 Hyde Street, San Francisco.

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President, John J. Sippy, 129 S. American Street, Stockton.
Secretary, H. S. Chapman, First National Bank Bldg., Stockton.

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President, P. J. Jackson, Box 73, San Luis Obispo.
Secretary, G. D. Kelker, First National Bank Bldg., Paso Robles.

San Mateo County Medical Society

President, F. S. Gregory, Redwood City.
Secretary, W. H. Murphy, Redwood City.

Santa Barbara County Medical Society

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Secretary, Alex C. Soper, Jr., 103 E. Micheltorena Street, Santa Barbara.

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President, Dorey R. Wilson, Santa Clara County Hospital, San Jose.
Secretary, Alison A. Shufelt, Garden City Bank Bldg., San Jose.

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Shasta County Medical Society

President, Sherman T. White, Redding.
Secretary, C. A. Mueller, Redding.

Siskiyou County Medical Society

President, R. H. Heaney, Yreka.
Secretary, C. W. Ankle, Dunsmuir.

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President, R. S. Leachman, 700 Sutter Street, Vallejo.
Secretary, J. W. Green, 327 Georgia Street, Vallejo.

Sonoma County Medical Society

President, A. M. Thompson, Sonoma.
Secretary, Guy A. Hunt, Santa Rosa.

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Secretary, E. R. McPheeters, Modesto.

Tehama County Medical Society
President, F. H. Bly, Red Bluff.
Secretary, F. L. Doane, Red Bluff.

Tulare County Medical Society
President, Harry J. Willey, Porterville.
Secretary, John C. Faine, Exeter.

Tuolumne County Medical Society
President, Geo. C. Wrigley, Sonora.
Secretary, W. L. Hood, Sonora.

Ventura County Medical Society
President, F. E. Blaisdell, Santa Paula.
Secretary, C. E. Schultz, Santa Paula.

Yolo County Medical Society
President, Thomas E. Cooper, Davis.
Secretary, John D. Lawson, Woodland.

Yuba-Sutter County Medical Society
President, John Duncan, Marysville.
Secretary, F. B. Lawton, Marysville.

League for the Conservation of Public Health
President, Dudley Smith, 407 Medical Bldg., 1904 Franklin Street, Oakland.
Secretary, W. T. McArthur, 419 Pacific Mutual Bldg., 523 W. Sixth Street, Los Angeles.
Executive Secretary, C. J. Sullivan, 610 Balboa Bldg., 593 Market Street, San Francisco.

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President, G. E. Ebricht, San Francisco.
Secretary, Walter M. Dickle, Sacramento.

State Board of Medical Examiners
President, P. T. Phillips, Santa Cruz.
Secretary, C. B. Pinkham, State Bldg., San Francisco.

Southern California Medical Association

President, Rexwald Brown, 1421 State Street, Santa Barbara.
Secretary, Charles T. Sturgeon, 509 Medical Office Bldg., 1136 W. Sixth Street, Los Angeles.

California Northern District Medical Society

President, C. J. Durand, Colfax.
Secretary, J. O. Chispeles, Chico.

Directory of Hospitals, Sanitariums, etc., of California

ALBERT H. ROWE SANITARIUM
Diabetes and Metabolic Diseases
2545 Regent Street, Berkeley, Calif.

ALEXANDER SANITARIUM
Nervous and Mild Mental Diseases
Belmont, Calif.

ALHAMBRA SANATORIUM
For Nervous Patients
Rosemead California

ALUM ROCK SANATORIUM
For the Treatment of Tuberculosis
San Jose, Calif.

ANDERSON SANATORIUM
Mental and Nervous Diseases
2535 Twenty-Fourth Avenue
Oakland, Calif.

BANKSIA PLACE SANITARIUM
Nervous and Mental Diseases
5227 Santa Monica Blvd.
Los Angeles, Calif.

BANNING SANATORIUM
Treatment of Tuberculosis and Throat Diseases
Banning, Calif.

CALIFORNIA SANITARIUM
For the Treatment of Tuberculosis
Belmont, San Mateo County, Calif.

CANYON SANATORIUM
For the Treatment of Tuberculosis
Redwood City, California

COLFAX SCHOOL FOR THE TUBERCULOUS
For the Treatment of Tuberculosis
Colfax, Calif.

DANTE SANATORIUM
Limited General Hospital
Van Ness and Broadway, San Francisco

FRANKLIN HOSPITAL
Limited General Hospital
Fourteenth and Noe Sts., San Francisco

FRENCH HOSPITAL
General Hospital
Geary Street, bet. 5th and 6th Avenues
San Francisco

GLEN LODGE
For Rest and Recuperation
Foothills above Redwood City, Calif.

GOTTBRATH'S SANITARIUM
(Dr. N. J.)
Nervous Diseases and Semi-Invalidism
Belmont, California

HOLLYWOOD HOSPITAL
1322 N. Vermont Ave.
Los Angeles, Calif.

HOSPITAL FOR CHILDREN AND TRAINING SCHOOL FOR NURSES
General Hospital for Women and Children
3700 California Street, San Francisco

JOHNSTON-WICKETT CLINIC
Anaheim, Calif.

LAS ENCINAS SANITARIUM
For Treatment of Nervous and General Diseases
Las Encinas, Pasadena, Calif.

LIVERMORE SANITARIUM
For Treatment of Nervous and Mental Diseases
Livermore, Calif.

MANNING, DR. J. B.
Home for sickly or convalescent children
Santa Barbara, California

MARY'S HELP HOSPITAL
General Hospital
145 Guerrero Street, San Francisco

MENDELSSOHN HEALTH HOME
870 Fell Street San Francisco

MONROVIA CLINIC
Diagnosis and Treatment of Tuberculosis
137 N. Myrtle St., Monrovia, Calif.

MOUNT ZION HOSPITAL
General Hospital
2200 Post Street, San Francisco

NILES HOME FOR AGED
Niles, Alameda County, California

OAKS SANITARIUM
For the Treatment of Tuberculosis
Los Gatos, Calif.

O'CONNOR SANITARIUM
General Hospital in Charge of Sisters of Charity
Race and San Carlos Streets,
San Jose, Calif.

PARK SANITARIUM
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Monrovia, Calif.

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Diagnosis and Treatment of Neoplastic Diseases
1052 W. 6th St., Los Angeles, Calif.

SCRIPPS METABOLIC CLINIC
SCRIPPS MEMORIAL HOSPITAL
La Jolla, San Diego, California

ST. FRANCIS HOSPITAL
Limited General Hospital
Bush and Hyde Sts., San Francisco

ST. GOTHARD'S
General Hospital
St. Helena, California

ST. JOSEPH'S HOSPITAL
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Buena Vista and Park Hill Avenues
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Limited General Hospital
27th and Valencia Sts., San Francisco

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2200 Hayes Street San Francisco

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General Hospital
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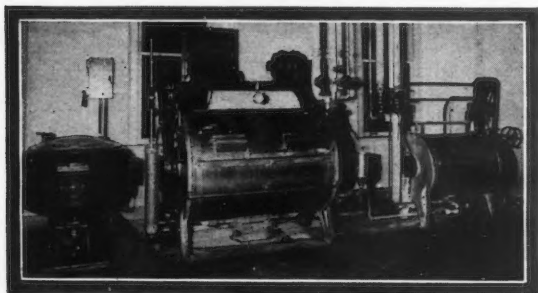
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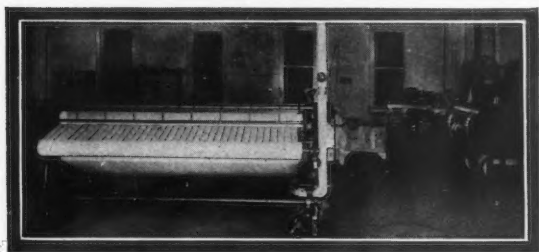
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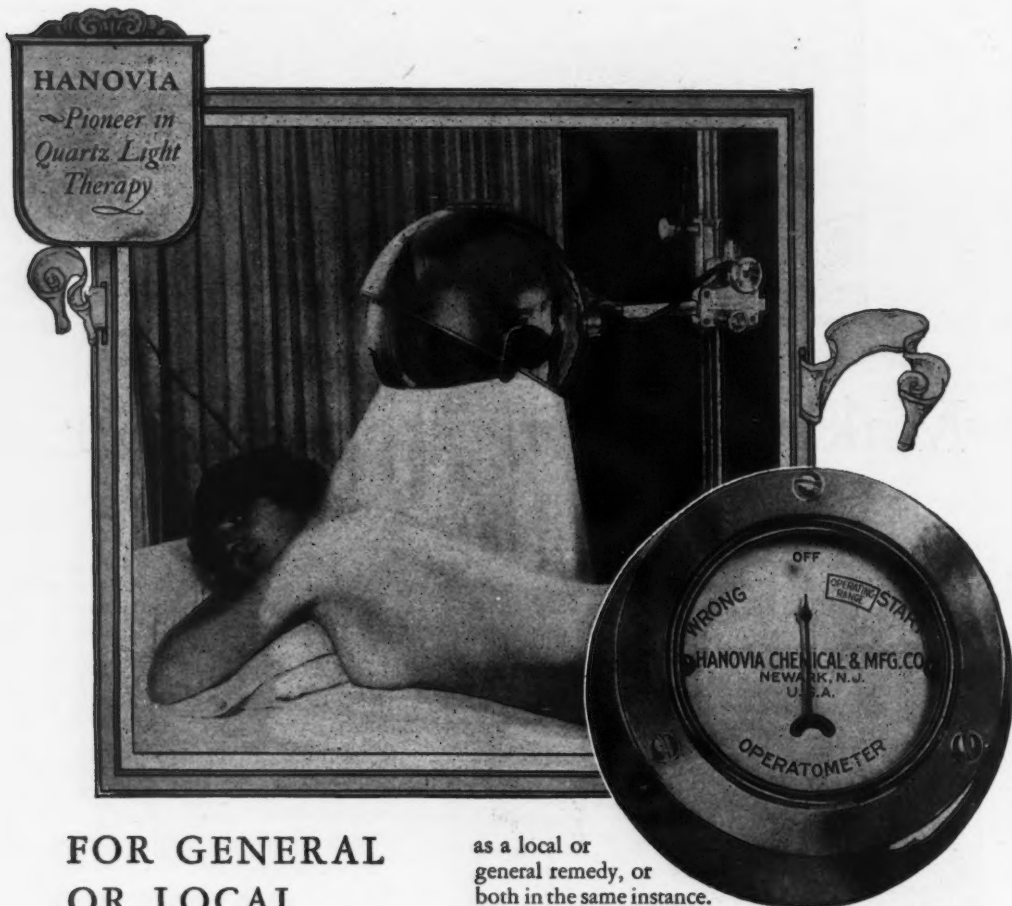
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BOOK REVIEWS

(Continued from Page 1642)

form. It is written in such simple language that no special training is needed to understand the contents.

The book is filled with descriptive illustrations and colored plates. The author has not only used his own collection, but has drawn freely from more extensive classics, such as Skillern, Poltzer, Pratt, and Isaac Jones. While this volume is particularly well adapted for teaching the medical student and for use by the physician in general practice, yet it is so comprehensive and so full of the author's own refinements of technique that it is also a most valuable reference book for the ear, nose, and throat specialist.

A Christian Science practitioner is a person understood to be acting as a sort of interlocutor between God and the person "in error." This is the common understanding at least of the uninitiated. We have previously drawn attention in these columns to the fundamental psychology of optimism which, outside of the claims made for healing, seems to comprise the value of Christian Science. "Faith Healers" have for time immemorial embraced the psychology of suggestion in promoting their cures. Patent medicine advertisers take advantage of the same suggestive psychology to accomplish their ends. Electric pads, the gas-pipe frauds, as illustrated by the "Oxidonor" of local fame, the chiropractor, and innumerable other examples disclose the value of faith and suggestion.—Bulletin Wayne County Medical Society.

We hear much about the passing of the family doctor. Don't be alarmed. The passing of the slipshod, unscientific bunk dealer is a reality. But the well-trained, properly equipped, experienced general practitioner has a field today greater than ever before. He is a good diagnostician. He sees his patient as a whole. He knows his peculiarities and circumstances. He can decide when to refer him to a specialist and when to protect him from the danger which is threatened by a narrowly specialist point of view.—New York State Journal of Medicine.

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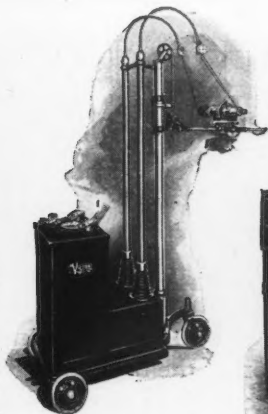
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(A-239-B)

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UNDER the above title a new monograph—amply illustrated—has just been released from the press. ¶ The urge to prepare the booklet came directly from the physician himself who submitted first one question and then another and wrote from this or that section of the country and at all seasons. Therefore, in attempting to prepare a collective answer or rather a collection of answers, we were obliged to consider the sectional as well as the seasonal requirements throughout the land.

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(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with California and Western Medicine in its advertising columns, and thereby with the physicians in California.

In addition to the articles enumerated in our last report, the following have been accepted:

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Normal Horse Serum (New and Non-official Remedies, 1925, p. 329)—Marketed in packages of one syringe containing 10 cc.; also in packages of one vial containing 20 cc. Eli Lilly & Co., Indianapolis.

Pertussis Vaccine—A pertussis bacillus vaccine (New and Non-official Remedies, 1925, p. 353), marketed in packages of four 1 cc. vials; in single 5 cc. vial packages; in single 20 cc. vial packages; and in packages of four 1 cc. vials. Eli Lilly & Co., Indianapolis.

(Continued on Page 1662)



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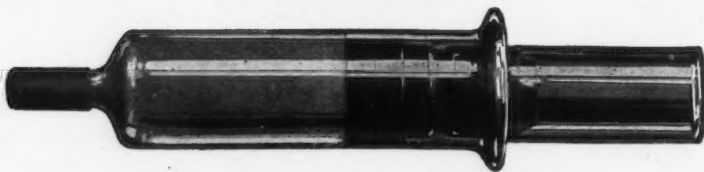
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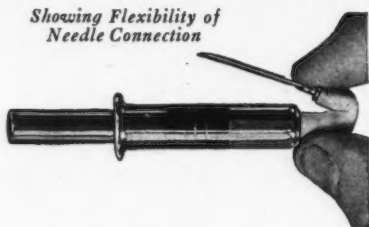
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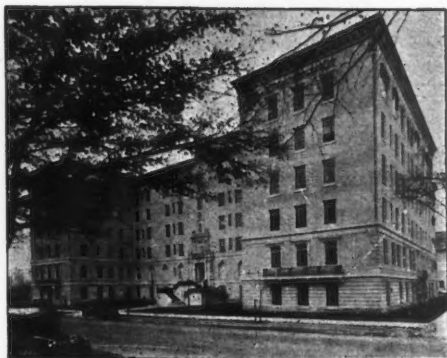
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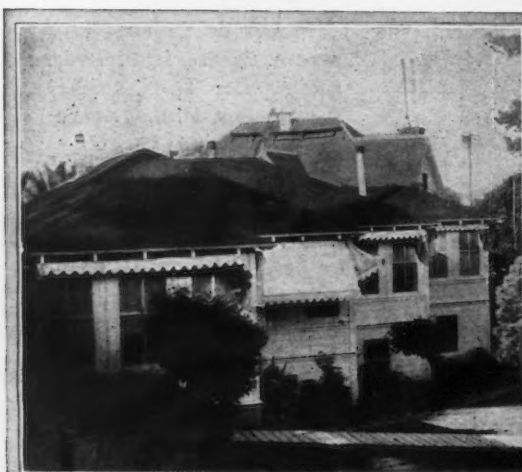
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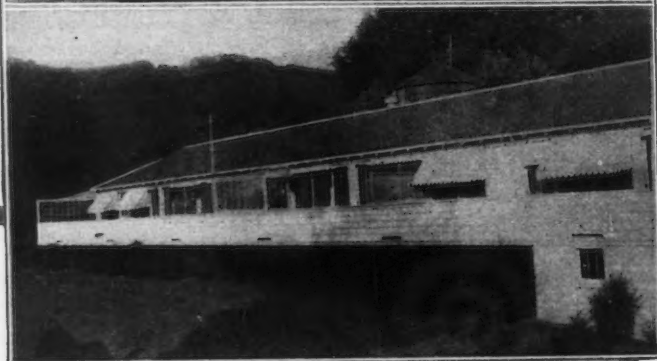


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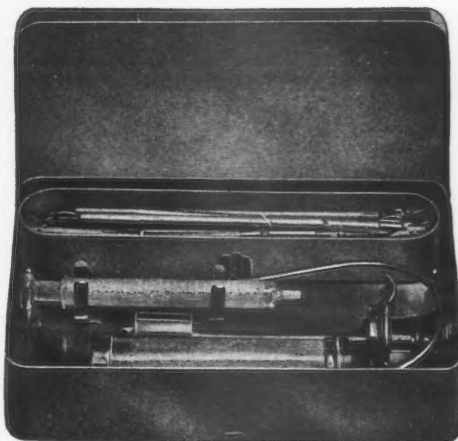
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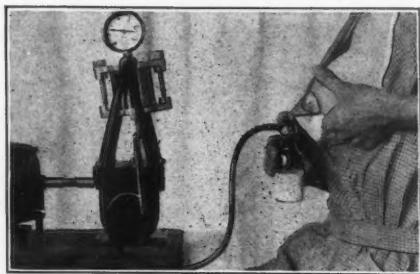
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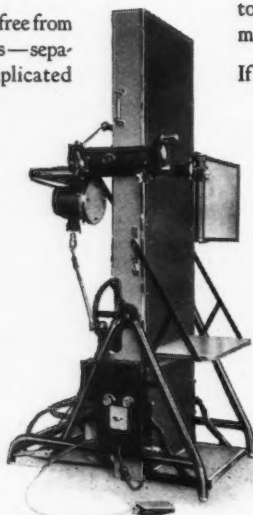
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(Continued from Page 1655)

Corpora Lutea Desiccated (P. D. & Co.)—The dried corpora lutea of cattle and swine. For a discussion of the actions and uses, see *Ovary, New and Non-official Remedies*, 1925, p. 251. The product is supplied in capsules containing five grains, and in tablets containing, respectively, two and five grains. Parke, Davis & Co., Detroit.

Streptococcus Vaccine (Lilly)—A streptococcus vaccine (New and Non-official Remedies, 1925, p. 359), marketed in single 5 cc. vial packages and in single 20 cc. vial packages. Eli Lilly & Co., Indianapolis.

Staphylococcus Vaccine (Lilly)—A staphylococcus vaccine (New and Non-official Remedies, 1925, p. 357), marketed in single 5 cc. packages and in single 20 cc. packages. Eli Lilly & Co., Indianapolis.

Staphylococcus Aureus Vaccine (Lilly)—A staphylococcus vaccine (New and Non-official Remedies, 1925, p. 357), marketed in single 5 cc. vial packages and in single 20 cc. packages. Eli Lilly & Co., Indianapolis.

Anti-streptococcus Vaccine (Lilly)—An anti-streptococcus vaccine (New and Non-official Remedies, 1925, p. 339), marketed in packages of one syringe containing 10 cc.; in packages of one syringe containing 20 cc.; in packages of one vial containing 10 cc.; and in packages of one double-ended vial containing 30 cc. Eli Lilly & Co., Indianapolis.

Pneumococcus Vaccine, Prophylactic (Lilly)—A pneumococcus vaccine (New and Non-official Remedies, 1925, p. 355), marketed in single 5 cc. vial packages. Eli Lilly & Co., Indianapolis.

Vaccine Virus (Lilly)—A vaccine virus (New and Non-official Remedies, 1925, p. 341), marketed in packages of one capillary tube and in packages of five capillary tubes. Eli Lilly & Co., Indianapolis.

Rabies Vaccine (Semple Method) (Squibb)—An anti-rabic vaccine (New and Non-official Remedies, 1925, p. 342) prepared according to the general method of David Semple (phenol killed). It is marketed in packages of fourteen syringes. E. R. Squibb & Sons, New York.



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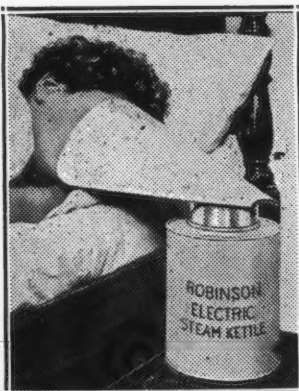
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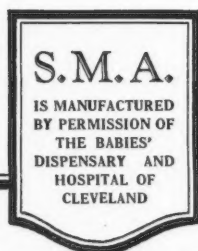
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